REPORT OF THE

SAN FRANCISCO PUBLIC UTILITIES COMMISSION

FISCAL YEAR
1939-1940

MUNICIPAL RAILWAY
WATER DEPARTMENT
HETCH HETCHY WATER SUPPLY
HETCH HETCHY POWER SYSTEM
ELECTRIC POWER BUREAU
AIRPORT
LIGHTING OF STREETS
GAS AND ELECTRIC SUPPLY

TREASURE ISLAND NIGHT

All the water, much of the transportation and a fair share of the electric energy required to operate the Golden Gate International Exposition, both in 1939 and 1940 originated in utilities under the management of the Public Utilities Commission

REPORT OF

SAN FRANCISCO PUBLIC UTILITIES COMMISSION

●

FISCAL YEAR 1939-1940

●

COMMISSIONERS

LEWIS F. BYINGTON
President

GEORGE FILMER
Vice-President

***JOHN P. MURPHY** **JOHN H. McCALLUM**

JOHN P. McLAUGHLIN

●

EDWARD G. CAHILL
Manager of Utilities

●

JOHN J. SHARON
Secretary of the Commission

●

FORREST B. GIBBON
Secretary to the Manager

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*Deceased.

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CITY AND COUNTY OF SAN FRANCISCO
PUBLIC UTILITIES COMMISSION

January 1, 1941.

Honorable Angelo J. Rossi,
Mayor of the City and County of San Francisco.

My dear Mayor:

In compliance with the provisions of the Charter of the City and County of San Francisco, the Public Utilities Commission herewith transmits to you its annual report covering the proceedings and operations of the various departments under the management and control of the commission for the fiscal year beginning July 1, 1939, and ending June 30, 1940.

On January 8, 1941, it will have been nine years since, under the provisions of the Charter adopted in 1931, the Public Utilities Commission was created, during which time a history of steady growth and progress has been written on the records of this city's municipal ownership of public utilities.

Careful consideration of detailed reports made by managers of the various utilities and submitted herewith, will show new economies, more efficient operation, increasingly better service to the public, together with an increase in revenues which will be favorably reflected in the city's tax rate.

These department reports include those from the San Francisco Water Department, the Hetch Hetchy Water Supply and Power System, the San Francisco Municipal Railway, San Francisco Airport and the Department of Street Lighting.

These favorable reports have been made possible in spite of extensive litigation involving the right of the city to dispose, through an agency contract, of power generated by the Hetch Hetchy project and also the right of the Municipal Railway to make extensions and betterments from its surplus funds.

However, it is gratifying to report that an agreement has been effected between the Public Utilities Commission and the directors of the Turlock, Modesto and Waterford Irrigations Districts whereby trial of all litigation pending between the City and said parties has been postponed for fifteen years. This significant development is one of the best examples of the trend toward friendly relations between the city and its neighboring communities.

Detailed accounts of these various matters are set forth in this annual report of the Public Utilities Commission.

Very respectfully yours,

Lewis F. Byington
President
Public Utilities Commission

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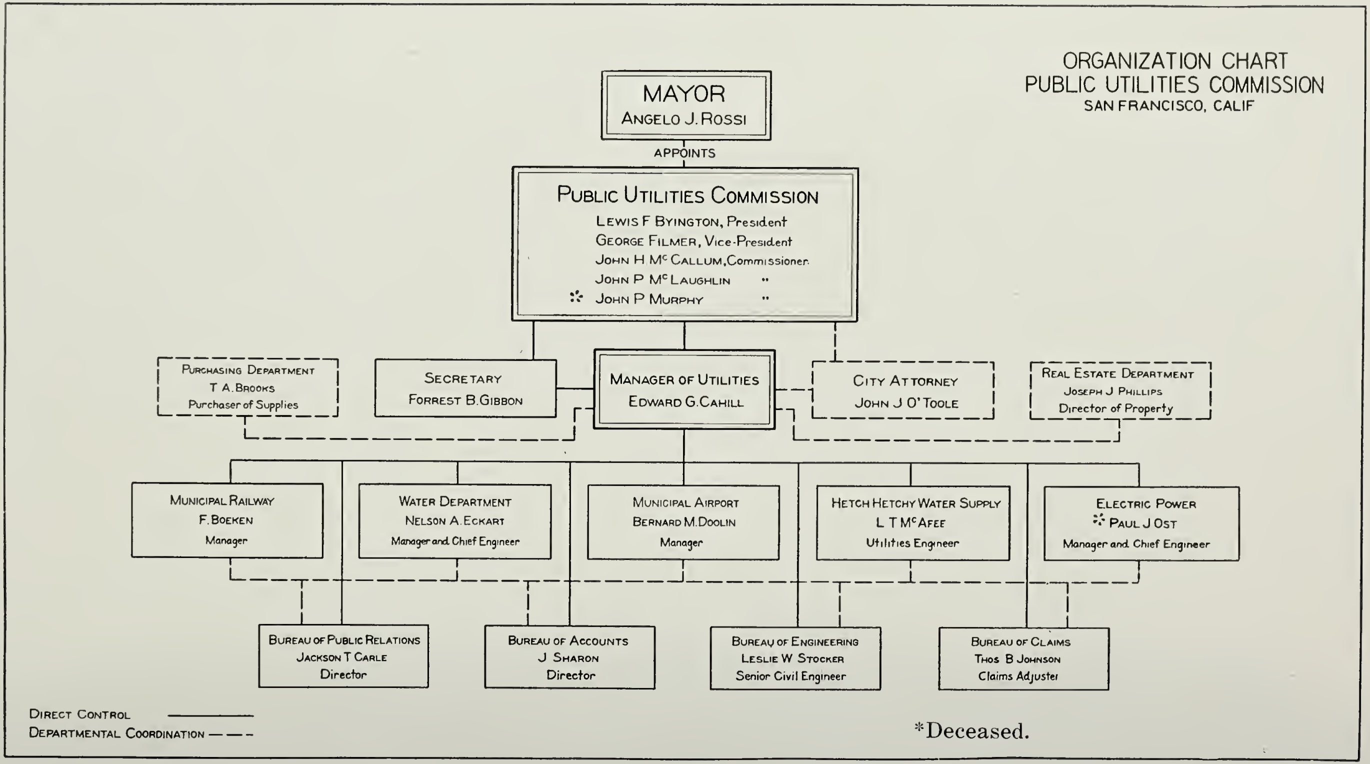
ORGANIZATION CHART
PUBLIC UTILITIES COMMISSION
SAN FRANCISCO, CALIF



*Deceased.

REPORT OF THE
SAN FRANCISCO PUBLIC UTILITIES COMMISSION

General:

In every respect, the municipal utilities under the control and management of the Public Utilities Commission increased their usefulness to the citizens of the city during the past fiscal year, as illustrated by increased consumption of service and increased revenues to the several departments.

New records were set in water sales, in passenger revenues of the Municipal Railway and in traffic at San Francisco Airport. Street lighting and Hetch Hetchy properties were substantially improved and various other services expanded to meet the growing needs of the city and the millions of visitors who thronged to it during the second year of the Golden Gate International Exposition.

Only untoward events of the year involved litigation—a subject which will be treated in more detail in subsequent portions of this report.

Water Department:

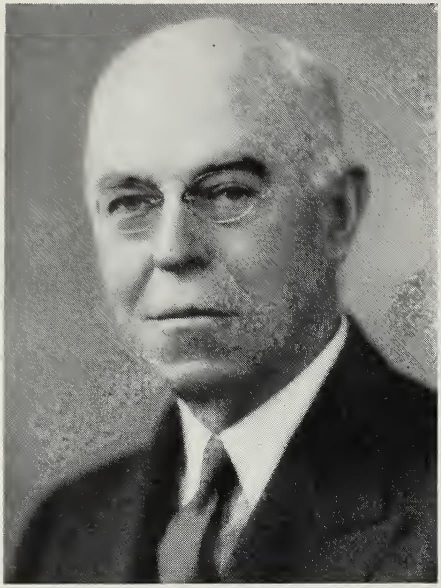
Another substantial increase in revenues marked the Water Department's operations for the fiscal year, reflecting an appreciable rise in water consumption. Net water sales amounted to $7,265,186, an increase of $246,122, or 3.5 per cent over the preceding year, which already had shown a gain of 2.4 per cent over 1937-38.

Water consumption averaged 68.6 million gallons daily, an increase of approximately 6 million gallons daily over the preceding year when a daily increase of 5 million gallons set a new record for consumption gain.

A daily average of 59.6 million gallons was consumed within the city limits, as compared with 9 million gallons consumed in suburban areas.

Especially marked were the increases in consumption in fast-growing subdivisions within the city limits, particularly Forest Hill, Merced Manor, College Hill and University Mound districts. Increased capacity in tanks, pumps, mains and reservoirs is considered imperative to permit the growth of these communities to continue without interruption.

An increase in the number of consumer accounts was natural under the circumstances. Of these there were 120,829 on June 30, 1940, as compared with 117,189 the preceding year.



LEWIS F. BYINGTON
President

Although water sales and consumption increased materially there was but a $9,060.09 increase in operating expenses. The profit from operations increased from $4,005,613 in 1938-39 to $4,241,872 in 1939-40. After adding income from sources other than the sale of water and deducting bond interest and miscellaneous expenses, there remained a net income of $2,599,093. This represents an increase of $304,766 over the preceding year.

Of the net income, $902,898 was contributed to the general fund and $681,709 was paid to Hetch Hetchy Water Supply for standby service, thus relieving taxpayers of this amount for payment of bond interest and redemption.

Activities of the water purification division continued to expand to assure a constant flow of uncontaminated water. Some time was devoted to work in cooperation with officials of the 1940 Golden Gate International Exposition relative to treatment of water supplied to Treasure Island.

Meanwhile, the engineering division made comprehensive studies to determine the most economical and practical method of providing additional distribution facilities to the higher level districts in the city. A long range program has been devised to solve the problems of those districts whose distributional capacities have already been taxed.

Plans and specifications were prepared and contracts awarded during the year for a total estimated amount of $249,137. Engineering, supervision and inspection services were provided on 39 jobs amounting to $354,024 for contract work performed during the year.

Municipal Railway:

All its records for number of passengers carried and for passenger revenues were broken by the Municipal Railway for the fiscal year just passed, and although there was a decrease in net profits, this was returned to the citizens in increased services.

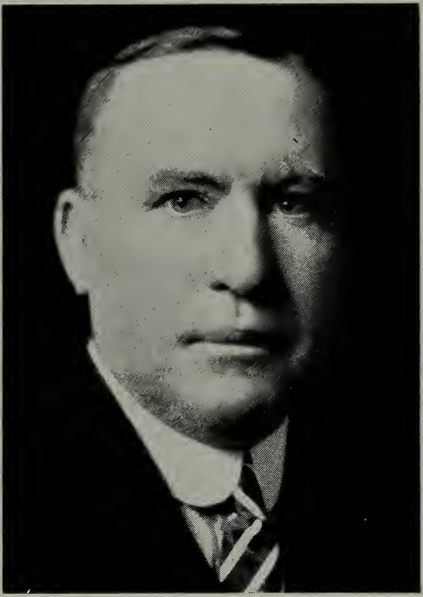
GEORGE FILMER, SR.
Vice-President

Passenger revenues amounted to $4,135,903, largest since the beginning of operations on December 28, 1912. Number of passengers carried was 111,302,499, as compared with 107,739,849 the previous year when a passenger volume record was set by exceeding the preceding year by 19.33 per cent.

Net profit for the year was $324,981, a decrease of $67,294 from the preceding year, due largely to cost of operation of four new motor coach lines which began operation during July and August, 1939, in districts in serious need of service.

The large volume of business is attributed in part to the difference between the fare structures of the Municipal Railway and the Market Street Railway Company. Another reason for larger volume was attendance at the Golden Gate International Exposition. Municipal Railway's 5-cent fare remains unique among the country's municipal mass transportation organizations not subsidized from tax funds.

JOHN H. McCALLUM
Commissioner



JOHN P. McLAUGHLIN
Commissioner

The four new bus lines, which accounted for $24,294 of the railway's passenger revenues, operate in the Miraloma, Sunset-Parkside, Bayshore and Telegraph Hill districts.

Meanwhile, five new stream-lined street cars, ordered during the preceding fiscal year, were placed in operation in December, 1939. They have proved extremely popular with the public, an indication that more cars of this type should be operated.

This possibility, however, is forestalled at present, as are all other proposed extensions and betterments, because of a taxpayer's suit which contends the railway may not legally spend surplus funds, from which all extensions and betterments are required by charter to be financed. It is the contention of the plaintiff that no surplus exists on the grounds that the railway has not completely funded its depreciation account.

J. P. MURPHY
Commissioner

Retention of the 5-cent fare with free transfer privilege on Municipal Railway lines in the face of an average fare of 8.33 cents throughout the United States, has resulted in an annual saving to patrons of what has been conservatively estimated as $2,700,000. In spite of this fact, the railway continues to operate at a profit, provide higher wages, and to pay bond interest and redemption. The only present indebtedness against the property is $1,300,000 in bonds which is being amortized at the rate of $100,000 annually.

After twenty-seven and one-half years of municipal operation the railway is now valued at $10,000,000 and is more than 70 per cent owned by the citizens.

Total mileage operated during the year was 10,058,316, representing an increase of 2.53 per cent over last year. Motor coach operations, which involved a 100 per cent increase in mileage, led to a loss of $147,540, which also doubles the coach operations loss of the previous year, indicating that it is rare for

The city has received a favorable decision in the Superior Court but is restrained from proceeding with purchase of new equipment or making bus line extensions pending appeal and final adjudication in the Supreme Court. This has seriously disturbed the bus operations of the railway and has, of course, prevented several districts from receiving services which the railway had been ready to install.

The suit was brought originally to prevent the city from spending $228,000 for the proposed new Howard Street trolley coach line. By the injunctive process this end has been accomplished only technically, as service on the line was to be installed by using motor coaches already on hand.

Other new capital expenditures for which funds were appropriated, but which were held up by this same suit, include $145,000 for the Seventeenth Street storage yard; new motor coach garage, $100,000; purchase of 20 new motor coaches, $180,000.

EDWARD G. CAHILL
Manager of Utilities

a bus line to operate profitably on a 5-cent fare.

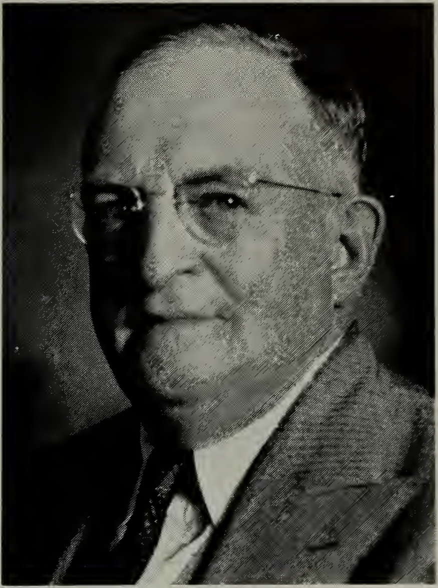
Airport Development:

An unprecedented surge in air traffic was experienced at San Francisco Airport during the year, resulting in the establishment of a number of new records for passengers and mail handled and for arrivals and departures of planes.

Among the reasons cited for this development, aside from the splendid terminal facilities offered at the airport, are increasing public confidence in planes, new interest in aviation as a measure of national defense, improved design of planes, and impetus given by the civilian pilot training program.

San Francisco Airport had a 12-month total of 126,546 passengers, an increase of 60 per cent over the preceding year, and an increase of 50 per cent over the highest year on record.

Arrivals and departures of transport planes totalled 17,797, an increase of 43 per cent; air mail cargo off and on, 1,315,311 pounds, up 21 per cent; and air express cargo loaded, 178,448 pounds, an increase of 45 per cent. Private plane landings and take-offs for the period were in excess of 100,000. This is in line with California's record for leading all other states in the Union in the number of planes, pilots and airports.



FORREST B. GIBBON
Secretary to Manager

JOHN J. SHARON
Secretary of the Commission

Outstanding development of the year at San Francisco Airport was the decision of United Air Lines to establish the company's western division headquarters there as soon as hangar, shops and offices are constructed. This will bring more than 500 new employees to the field, with an annual payroll in excess of $1,300,000. All the company's administrative and maintenance activity west of Denver will be handled at the new quarters, including the maintenance base for the new fleet of 4-motored transports to be put into use next year.

Meanwhile at Treasure Island, Pan American Airways continued to expand its preliminary work as a first step toward establishment of scheduled air service between San Francisco and New Zealand. This service is to start on July 12, 1940.

At the close of the Golden Gate International Exposition work was to begin on the grounds to put it in shape as a second municipally-owned airport for land planes.

Hetch Hetchy Power Disposal:

The United States Supreme Court on April 22, 1940, held the city to be in violation of the Raker Act, under the terms of which power generated by the Hetch Hetchy water and power system may not be sold to any private person or corporation. The United States District Court had originally held the city to be in such violation by virtue of its agency agreement with the Pacific Gas and Electric Company, but this decision was reversed subsequently by the United States Circuit Court of Appeals. The Supreme Court again ordered reversal and the original injunction against disposal of power to the Pacific Gas and Electric Company through an agency agreement was upheld.

This situation, unless corrected, would have led to an annual loss of $2,400,000 in revenue to the city and would have added materially to the taxpayers' burden.

Through negotiation with Secretary of the Interior Ickes, the officials of the city obtained a continuance of the injunction pending negotiation of a lease by the city of the company's entire San Francisco electrical distribution properties, or, failing in that, submission to the electorate of a bond proposal for acquisition or construction of such properties. No decision has been reached, but revenue for the coming fiscal year remains assured, as a stay of the injunction to June 30, 1941, has been obtained.

Hetch Hetchy Water Rights:

Six years ago the directors of the Turlock, Modesto and Waterford irrigation districts met with members of the Public Utilities Commission and agreed to appoint representatives to attempt settlement of pending litigation. Extensive studies made clear to all litigants there was sufficient water for both plaintiffs and defendants, and that cooperative efforts were resulting in operations best suited to meet the requirements of both.

As a result of these studies and subsequent verbal agreements, the districts and the city executed stipulations to postpone trial of pending litigation for 15 years. This initial agreement was declared to be unprecedented in the history of riparian litigation, and went far toward cementing cordial relations between San Francisco and neighboring communities.

Hetch Hetchy Construction:

Installation of an eduction system, a conduit aerating system and a ventilating system was completed at O'Shaughnessy Dam on October 10, 1939. These improvements will eliminate numerous hazards to the life and operation of the structure, and will permit safe access to the operating chambers.

On December 14, 1939, work was finished on a small concrete dam 700 feet downstream from the downstream face of O'Shaughnessy Dam, which will prevent water from flowing back upstream into the drainage tunnel. Meanwhile plans and specifications were prepared for parapet lighting on the main dam.

Street Lighting Construction:

In order to assist in keeping municipal expenditures at a minimum, the Public Utilities Commission has refrained in the past from making general lighting improvements. This fiscal year, however, a comprehensive survey was undertaken and the program of modernization begun in 1939 is now nearing completion. This program will not only improve lighting but will effect substantial economies in operation. These improvements were made possible by a Pacific Gas and Electric Company rate cut which provided the bureau with a surplus. When the modernization program is completed 1,683 new lights will have been added and 5,170 old-type lights will have been replaced.

The percentage of taxes spent each year for street lighting is decreasing apace with the downward trend of costs per lamp. This is due not only to reduction in street lighting rates, but to acquisition of ownership by the city of an increasingly large portion of the street lighting system, thus eliminating fixed charges from the rate applied to 3,446 lights.

Meanwhile, the bureau continues to make studies of the gas and electric supply problems of the various city departments to supplement its record of the past two years wherein it obtained annual savings in excess of the total amount required to change equipment and consumption schedules.

Commission Personnel:

At its first meeting in 1940 the Commission unanimously reelected President Lewis F. Byington and Vice President George Filmer to serve their ninth consecutive one-year terms in these positions. Both have served respectively as president and vice president since its organization on January 8, 1932.

The Commission regretfully records here the death of Commissioner John P. Murphy on June 4, 1940. At the close of the fiscal year Mayor Rossi had not filled the position thus made vacant.

On June 10, 1940, the Commission spread upon its minutes a resolution in memory of the deceased, quoted, in part, as follows:

"By appointment of the Mayor he served for five years and up to the time of his death as a member of the Public Utilities Commission. He performed the duties thereof with ability and faithfulness. As a husband and father, he was tender, devoted and kind. In civil and fraternal life, he spread brotherly love and charity along his pathway. As a man, he walked the way of life with trust in God and humanity."

The Commission will long miss the ability, energy and friendship of its former fellow official and companion.

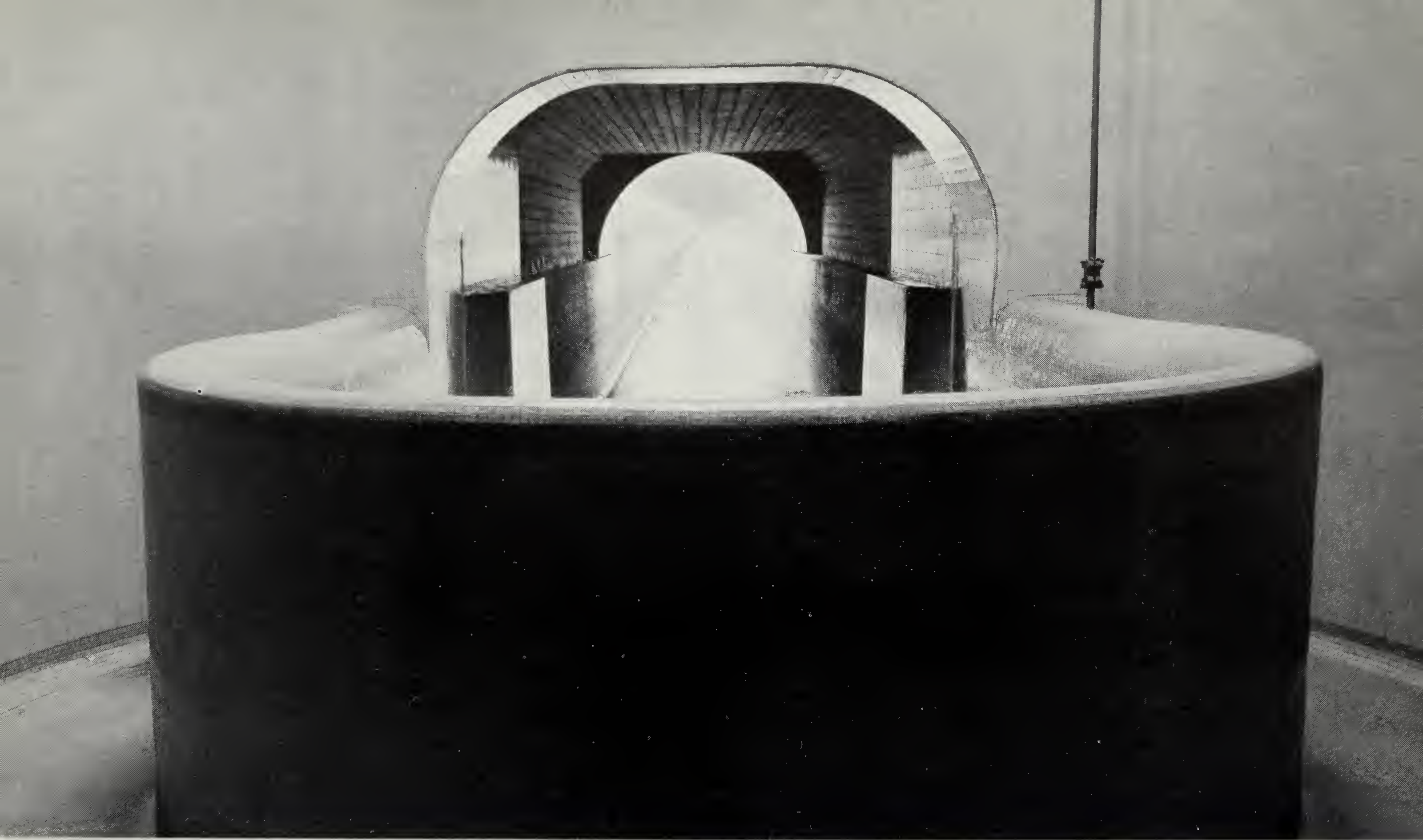
General Office:

The Public Utilities Commission held 46 regular meetings during the fiscal year. The Commission adopted 581 resolutions and awarded 55 contracts for work costing $542,000.69. Contract payments approved during the year amounted to $1,032,251.83. During the same period it accepted as completed 47 contracts and leased 75 parcels of property.

Audits:

Books and accounts of the various utilities under the jurisdiction of the Commission are audited annually by certified public accountants under the direction of the Controller of the city and county. In addition to these annual audits, the accounting bureau of the Commission and the Controller maintain a constant surveillance over the budgetary and bond expenditures of the utilities.

In succeeding sections of this volume will be found detailed reports of the activities and operations of each of the departments and bureaus under the jurisdiction of the Public Utilities Commission.



PULGAS TEMPLE
A lining of green tinted tile in the weir basin adds to the pleasing effect of the tumbling water.

SAN FRANCISCO WATER DEPARTMENT

N. A. ECKART

General Manager and Chief Engineer

N. A. ECKART
General Manager and Chief Engineer
San Francisco Water Department

Water consumption for the system during the year ending June 30, 1940, averaged 68.6 million gallons daily, an increase of approximately 6 m. g. d. over the preceding year. The major part of this increase occurred in the first 6 months of the year, a season of heavier than normal rainfall acting to retard the increase in the second half of the year. However, notwithstanding this, for the second successive year the gain in consumption exceeded the greatest annual gain previously recorded in the history of the system, either under the city's or private operation.

Reflecting the increased consumption, net water sales amounted to $7,265,186, an increase of $246,122, equivalent to 3.5 per cent over 1938-39. Of this increase, sales in San Francisco accounted for $212,905 while suburban sales increased $33,217. The number of consumer accounts at the close of the year was 120,829, an increase of 3,640.

Continued increase in water requirements within the city, particularly in the higher level residential districts taxed the capacity of both transmission and distribution facilities to a point where the margin of reserve is no longer adequate. To illustrate, for a number of days during the summer peak it was necessary to bring in to the Sunset reservoir between 37 and 38 million gallons daily through the 54-inch San Andres pipe line which has a maximum capacity of 39 million under the most favorable conditions with San Andres reservoir full. Studies were made during the year to determine the most economical and practicable plans for relieving this situation.

Due to an unfavorable season, the walnut crop this year was very poor both with respect to the size of the crop and the quality of nuts. Installation of a system of irrigation for the orchard is recommended which it is believed will do much to maintain higher crop standards.

WATER PRODUCTION

General Operation:

San Francisco's public water supply is obtained from the Water Department's local sources in San Mateo and Alameda Counties and from the Tuolumne River water shed in the Sierra Nevada mountains known as the Hetch Hetchy development. The Hetch Hetchy system is drawn upon to meet the deficiency in the local supply and to maintain the maximum storage in the local reservoirs compatible with good operation and avoidance of undue water waste. The use of Hetch Hetchy water with its gravity flow into Crystal Springs reservoir permits elimination of considerable pumping in the local system with mutual benefit to the department and to landowners in the drainage areas.

The Hetch Hetchy system east of Alameda Creek is under jurisdiction of the Hetch Hetchy Water Supply organization. From Alameda Creek west, the aqueduct is operated by the Water Department.

The Water Department production system is operated under the general supervision of the Engineer of Water Production, and is geographically divided for operating purposes into the Peninsula Division and the Alameda Division, each with a superintendent in direct charge.

The Peninsula Division includes all territory south of San Francisco and west of the east shore of the bay. The main units of this division are the Upper and Lower Crystal Springs, San Andres and Pilarcitos reservoirs, together with the appurtenant pipe lines, aqueducts, pumps and other facilities for delivering water into San Francisco and to Peninsula consumers.

The main units of the Alameda Division, which includes all of the Water Department system east of the bay, are the Calaveras reservoir, the Pleasanton wells, the infiltration galleries at Sunol and the various pipe lines, aqueducts and appurtenances necessary for delivering water gathered at these points to the Peninsula reservoirs and to a few local consumers.

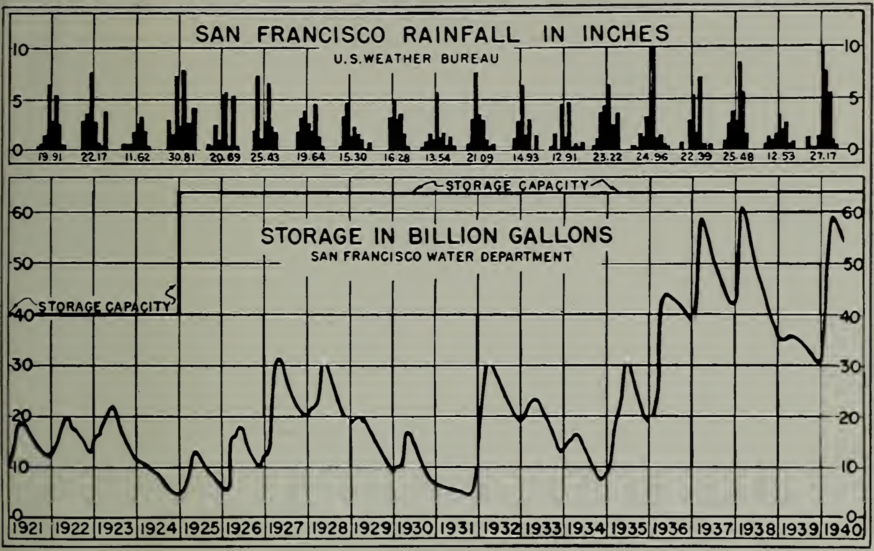
During the past fiscal year, local sources produced 31,383,000,000 gallons of water. The Hetch Hetchy system delivered an additional 14,814,000,000 gallons, making a total of 46,197,000,000 gallons available. This water was disposed of:

to supply consumers	25,104,000,000	gallons
to Alameda County Water District	1,423,000,000	"
to increase local reserve storage	19,670,000,000	"
Total	46,197,000,000	gallons

The Hetch Hetchy delivery averaged 40.5 million gallons daily for the year. This delivery was practically all made prior to February 26th when it became necessary to shut down in order to reserve storage space in the reservoirs for local run-off. The total Hetch Hetchy delivery from October 28, 1934, to June 30, 1940, is 59,067 million gallons—an average of 28.5 million gallons daily or a quantity equal to nearly one-half of the total consumption during that time.

The draft on water resources to meet consumption requirements for the year 1939-40 averaged 68.6 million gallons daily—an increase of 6.0 million gallons daily or 9.6% over the previous year. The bulk of this gain was accounted for in the first half of the fiscal year, with a 6.9% gain in the city and a 113.6% gain in the suburban area. The gain for the second half was at a decreasing rate, with an average gain of 5.6% in the city being partially offset by a 3.7% loss in the suburban consumption following the above normal rainfall of the past winter.

The San Francisco distributing system was supplied entirely with water drawn from the Crystal Springs and San Andres reservoirs. The Crystal Springs reservoir was replenished with water drawn from Hetch Hetchy, Calaveras and local run-off. The San Andres reservoir was replenished with water from Pilarcitos reservoir, local run-off and water pumped from the Crystal Springs reservoir.



Consumers in Alameda County were supplied with water from several sources —Pleasanton wells, Calaveras reservoir, Sunol filter beds and Hetch Hetchy. Consumers on the west side of the bay from Redwood City south were supplied from the Bay Crossing pipe lines with Hetch Hetchy or Calaveras water. All other suburban consumers were supplied from the transmission mains leading from the Crystal Springs and San Andres reservoirs to San Francisco.

Rainfall Catchment and Storage:

Rainfall on the local watersheds was approximately 13% above normal. The resulting run-off was more than double the seasonal average. The storage increase from a minimum of 30,197 million gallons on December 14th to 59,640 million gallons on April 9th, was 29,443 million gallons as compared to a twenty-two year average of 11,947 million gallons. At the end of the run-off season all the local reservoirs were practically filled and Crystal Springs reservoir was spilling over. The storage on June 30, 1940, was 54,789 million gallons, a gain of 19,670 million gallons from June 30, 1939.

In addition to this surface storage, the gravel basin underlying the Pleasanton well field remains filled and again overflowed for several months this Spring through artesian wells in the lower end of the valley. Also, the "advance release" to the Alameda County Water District was increased 1,459 million gallons to a total of 17,995 million gallons, all of which is recoverable by the Water Department should an emergency make such recovery necessary.

Transmission:

Water consumption within the City limits required delivery of a daily average of 59.6 million gallons of water into the City system. Of this amount, 40.1 million gallons daily were brought through the three transmission mains leading from San Andres reservoir which discharge into the College Hill, Lake Honda and

Sunset, Stanford Heights and Merced Manor distributing reservoirs in San Francisco. The other 19.5 million gallons daily were delivered to the University Mound reservoir through the two transmission mains from the Crystal Springs reservoir.

The suburban consumption averaged 9.0 million gallons daily. Service to these customers is provided directly from the several main transmission supply lines at various points throughout the system.

An average of 28.6 million gallons per day was pumped from the Crystal Springs reservoir through the Crystal Springs aqueduct to the San Andres reservoir.

An average of 51.6 million gallons daily was transported across San Francisco Bay in the two Bay Crossing pipe lines. Of this quantity, 3.4 million gallons daily were used by consumers served directly from these lines and the balance, averaging 48.2 million gallons daily was delivered into Crystal Springs reservoir.

The Hetch Hetchy system supplied 38.2 million gallons daily of the total and Calaveras reservoir supplied the other 13.4 million gallons daily. No water was brought across the bay in the old Alameda pipe.

Reservoirs:

Gain of 23,280 million gallons at Calaveras reservoir brought the storage from a low of 7,722 million gallons on January 1, 1940, to a peak of 31,002 million gallons on April 27, 1940. The water level at this point was within 1.25 feet of the spillway lip. This large storage increase was accounted for by a seasonal rainfall of 25.42 inches at Calaveras, which was slightly more than the normal of 25.05 inches.

The floodwaters brought in large quantities of driftwood and the high water killed a large amount of brush and trees growing along the higher levels of the reservoir, all of which will have to be gathered and burned when the fall rains start.

Algae growths made it necessary to bluestone the lake three times during the year, using a total of 35 tons of copper sulphate. The dosages were in July, 1939, at 0.9 pounds per million gallons, in November at 2.6 pounds per million gallons and in May, 1940, at 1.0 pounds per million gallons. Powdered or "snow size" copper sulphate was used and applied with motor-driven spray pumps designed and built by the Water Department. Excellent results in distribution and economy were achieved by this method. A new launch designed expressly for bluestoning the lake was purchased to replace the present launch which had seen 16 years of continuous service.

The bodies of the 16-inch regulating valves on the Calaveras aerator eroded completely through at the bottom below the valve seats, due to cavitation. Erosion also occurred in the 16-inch to 20-inch increasers below the valves. One valve and increaser were removed and experimentally repaired at the Water Department machine shop with such excellent results that four more were removed and similarly repaired. When these are re-installed, the remaining three valves and increasers will be similarly treated. At present the aerator is operating on only four of the eight aerator header pipes.

Experiments were made with copper sulphate treatments in small quantities to prevent the growth of algae in the aerator basin. The results were such as to justify the installation of permanent equipment for this purpose, but further study is necessary to determine the best point of application.

CALAVERAS SPILLWAY STILLING BASIN
Now completed, the basin, provided with baffle piers and dentated sill, has a depth of 17 feet below the water surface shown.

The reconstruction of the spillway stilling basin and the improvement of the creek channel below were completed in February, 1940. A description of this work is included in the Engineering section of this report.

The contract for the spillway reconstruction also included some grouting operation of the ground extending across the lip of the spillway and into the hillside forming the west abutment of the dam. This grouting was done in an effort to cut off seepage of water into the 8-foot outlet tunnel, which occurs when the water level in the reservoir is above elevation 726. Observations made since filling the reservoir so far indicate that the seepage has been reduced by about 10% to 20%, which is not as effective as had been expected.

Repairs were made to the underpinning of the Calaveras keeper's cottage where termites had done considerable damage. This cottage is now 25 years old and is in need of a general rehabilitation which is planned for the coming year.

The numerous floods of the past winter made it necessary to maintain screen cleaning crews at the Upper Alameda diversion dam for periods of as long as 48 hours at a time. Large quantities of gravel, brought down by the floods, were sluiced out on several occasions. The screens were scraped and painted and the recorder house was repainted before the start of the rainy season. The old cookhouse at the west portal was torn down and the lumber salvaged.

Crystal Springs reservoir was maintained at a fairly high level throughout the summer, fall and early winter with Hetch Hetchy water. Since the end of the spring run-off season it has been replenished with water drawn from the Calaveras reservoir. A total of 17,624 million gallons of Hetch Hetchy and Calaveras water was delivered to Crystal Springs during the year. Storage at June 30, 1940, was 18,417 million gallons—1,252 million gallons more than at June 30th a year ago.

The above normal, concentrated rainfall of the past Winter filled the reservoir to the spillway lip on February 27, 1940. With the inflow from Calaveras and Hetch Hetchy previously cut off, a controlled quantity of water was allowed to spill from that date to March 19th, and again from March 27th to April 20th. A total of 2,007 million gallons was spilled, keeping the flow in San Mateo Creek below equivalent maximum flow conditions at all times. The creek channel had been previously cleared of brush to the Hillsborough city limit and the spilled water created a very picturesque little stream.

The high water level caused some damage by erosion of the upper slope at the Upper Crystal Springs dam where the road to Half Moon Bay crosses over the dam. At one spot the bank was washed out to the highway guard rail. State highway crews repaired the damage by dumping large rock gathered from Water Department property.

A new wood furnace was installed in the watchman's cottage at Upper dam and the interior of the building was painted.

The weir and interior of the basin in the Pulgas temple were lined with green tile. A bronze plaque was installed inside the temple well, bearing the same inscription as is carved in the stone around the top of the temple. Information signs were put up at both ends of the parkway. The sidewalks around the reflection pool were extended and the automobile parking area was oiled to eliminate dust. More native plants and shrubs were planted to further increase the beauty of the spot. Chicken netting was strung on the barbed wire fence around the parked area to keep the deer out and prevent them from feeding on and destroying the plants and shrubs.

Large rock was hauled from the Crystal Springs quarry and placed on the embankment at the outfall of the Pulgas canal to stop erosion caused by the swirl from large flows of water.

The San Andres creek channel was cleared of brush and straightened out between San Andres dam and Crystal Springs reservoir. Additional clearing was done below the high water line of both Crystal Springs lakes.

The Upper Crystal Springs reservoir was given one treatment of copper sulphate in September, 1939. The dosage was at the rate of one pound per million gallons and a total of 5,600 pounds of copper sulphate was used. The lower lake was given two treatments, each averaging one pound per million gallons. The first treatment in September used 10,800 pounds of copper sulphate and the second in May, 1940, took 11,763 pounds.

The San Andres reservoir level was maintained largely by pumping water from the Crystal Springs reservoir. The lake was allowed to lower in the fall to provide room for the winter run-off. At the end of the run-off season the storage was 6,124 million gallons with the water level only 5 inches below the spillway lip. A total of 10,451 million gallons of water was transferred from Crystal Springs to San Andres during the year. Storage at June 30, 1940, was 5,827 million gallons, about the same as the year before, and with the water surface 2 feet 4 inches below the spillway lip.

The reservoir was given three copper sulphate treatments during the year. The dosages were all at the rate of one pound of copper sulphate to each million

SIERRA POINT

Due to moving ground, the Crystal Springs 44″ pipe was removed from the suspension bridge which had provided emergency support to a bench excavated in the solid ground underlying the slide.

gallons of water in storage. The amounts of copper sulphate used were: 6,100 pounds in September, 6,000 pounds in October and 6,300 pounds in April. All treatments were made with the gasoline driven pump which sprays the dissolved powdered copper sulphate crystals over the water surface.

Maintenance work on the San Andres watershed was confined to normal fire-guarding and clean-up.

Rainfall at the Pilarcitos dam for the 1939-40 season was 51.66 inches. This is 5.83 inches above normal and is the heaviest rainfall since the season of 1908-09 when 53.96 inches were recorded.

The Pilarcitos reservoir was lowered to 256 million gallons of storage on December 31, 1939. The concentrated rainfall in January and February caused the reservoir to fill to 1,020 million gallons and spill over the new spillway on February 27, 1940. A total of 88 million gallons was spilled during a period of four days. Storage on June 30, 1940, was 740 million gallons—approximately twice that of a year ago.

The reservoir was treated twice with copper sulphate to prevent seeding the San Andres reservoir with algae from this source. The first treatment, in April, 1940, used 1,300 pounds of copper sulphate and averaged 1½ pounds per million gallons of water. The second treatment, in June, 1940, used 900 pounds and averaged one pound per million gallons.

The heavy rainfall necessitated more than the normal amount of road maintenance. A number of large trees blown down during a heavy wind storm were removed from the Stone Dam road. A slide closed the road leading to the garage at the Pilarcitos cottage so the garage was rebuilt in a new location. The bridge over San Mateo Creek in Fifield Valley was rebuilt and the shoulder of the road was widened on account of slides in several places. A number of large culverts were replaced on the various roads leading to Pilarcitos.

The kitchen and bathroom of the Davis Tunnel cottage were painted and the livingroom floor was sanded and stained. A wire fence was built around the garden to keep wild animals from destroying the plants.

The usual amount of fence repairing, fire-guarding and cleaning up was done throughout the watershed areas.

Pump Operation:

The pump on Well C-21¾ at Pleasanton was operated for eight months of the year to supply the Sunol consumption. For the other four months from February 11 to June 18, 1940, the artesian flow was sufficient to meet the Sunol requirements.

The pump on Well G-22 was operated from December 10th to 29th to supply water for irrigating the Sunol walnut orchard.

The pump on Well G-6¾ was removed as the land on which this well is located was sold.

The departments' "Town Well" was pumped for the first six months of the fiscal year to supply the town of Pleasanton. The high water level in the Pleasanton Town Well relieved the Water Department of this pumping obligation from January 9, 1940, to July 3, 1940.

The Pulgas pumps on the Bay Crossing pipe line were not operated during the year as the entire water catchment at the Sunol filter beds was either delivered to local consumers or made available to the Alameda County Water District as "advance releases." The motors on units No. 2 and No. 3 were cleaned and repaired and the station kept in readiness for operation.

In the Crystal Springs pump station there are four pumping units three of these (No. 1, No. 3 and No. 4) are used to boost water to San Andres reservoir, the fourth (No. 2) when in use has a booster to increase delivery to University Mound reservoir.

The San Andres pumps have a combined capacity of 49 million gallons daily. During the past year one of these pumps was operated for 296 days, a second for 262 days and the third for 113 days. All three pumps were shut down on three different occasions for a total of 70 days during the winter to allow the Crystal Springs aqueduct to be utilized in transporting flood waters. An average of 28.6 million gallons daily was pumped from Crystal Springs to San Andres. This was 20% less than the previous year's pumpage.

New bearings were installed in Unit No. 3. The slip rings were ground and the commutators turned on Units No. 3 and No. 4. The insulators on the 60,000 volt power line are being tested. Sixty-six per cent of those tested so far were found to be faulty and were replaced.

The Crystal Springs booster pump Unit No. 2 was not operated during the year.

PILARCITOS SPILLWAY

The new concrete spillway which replaced the old manually operated waste gates spilled for the first time on February 28, 1940.

Pipe Lines:

As in the past all water brought through the transmission pipe lines was treated with chlorine or with chlorine and ammonia. Water brought through the Calaveras pipe line was also aerated.

The one and one-third miles of private road leading to the Tesla Portal chlorine plant was graded, soft portions were graveled and one culvert was replaced. Some 1,600 feet of woven wire fence was installed around the plant and cottage. Loam was hauled in and a dozen trees were planted to shade the cottage and to act as a windbreak.

The Pleasanton pipe line was operated with only routine maintenance except for one break when a plow punctured the pipe.

The Calaveras pipe line was shut down on January 14th, after having delivered a small flow of from 5 to 10 million gallons daily into the Hetch Hetchy aqueduct since the start of the fiscal year. A small delivery was resumed on April 4th and gradually increased so that during May and June the rate of flow was at the maximum capacity of 74 million gallons daily. Seven new gates were installed in the fence along the Calaveras road to give freer access for maintenance and patroling on this line.

The Niles-Irvington pipe line was not used for carrying water for delivery across the bay but it was used at various times with reversed flow to by-pass water from the Bay Crossing pipe lines to the Niles reservoir. One leak from electrolysis developed on the top of the pipe at a point where the line crosses under the Western Pacific Railroad on the Ellsworth property.

The old Alameda pipe line on the east side of the bay was used to supply consumers between Niles and Centerville, and to deliver water to the Alameda County Water District's absorption pit north of Centerville. This pipe was operated throughout the year with no maintenance or repairs, although portions of it are in a very decrepit condition.

The Alameda pipe between Burlingame and Belmont was used to deliver water to local consumers. Twelve leaks and one blowout occurred on this section during the year. The blowout was at a point about ½ mile north of Belmont and on account of the number of consumers on the line only quick temporary repairs could be made at the time. Permanent repairs were made during the Winter when consumption was low and the local water companies served were able to care for their consumers from storage. While the line was drained, several old leak plugs were cut off inside the pipe and patches welded over the holes. Pipe trestles at Belmont and San Carlos were repaired.

The work of regulating the flow of water in the Bay Crossing pipe lines from the Irvington portal was considerably facilitated by the installation of a telephone line from the tunnel portal to the Niles-Irvington pipe line connection. This line was connected to the department's telephone system at Sunol and now provides communication between all regulating points on both sides of the bay.

The Irvington portal chlorine plant was operated at various times during the year to supplement the Tesla treatments, to chlorinate the Bay Crossing pipe lines and to add SO_2 to eliminate excess chlorine used in treating the Coast Range tunnels. All exposed iron work in the plant was painted with aluminum paint.

Replacement of posts and caps on the trestle bents of Bay Crossing pipe line No. 1 between Newark and Dumbarton Point was completed last summer. The original posts and caps on this 5 miles of trestle were Douglas fir, installed in 1924, and dry rot made it necessary to replace about 90% of them. The replacement was made with redwood and a center post was added to make a three-legged bent in place of the former two. Seventy per cent of the pipe on this trestle was spot-cleaned and repainted with Inertol. The other 30% was not completed due to a lack of funds appropriated for this purpose.

External corrosion due to electrolytic action continued to cause many leaks on the No. 1 Bay Crossing line, along a 1,000 foot section east of Willow Street at Newark. The pitting is confined to a narrow strip about 18 inches to 24 inches wide along the bottom of the pipe. A cathodic corrosion eliminator was installed on the line near Willow Street in an endeavor to check the excessive corrosion at this point. Five leaks due to electrolytic action occurred at other locations. One of these was near the Southern Pacific Railroad north of Irvington, two were near the Newark gate house and two were on the west side of the bay in the Eagle Hill section.

Metal platform gratings were installed under the expansion joints of both pipes on the Bay Crossing bridge to enable men to work in safety under the joints. In January, the submarine pipes entering the caisson were siphoned and pumped dry for a distance of 100 feet back from the reservoir in the caisson. An inspection disclosed the submarine pipes and the bottom of the standpipe to be free of any accumulated material. A cross-connection with 30-inch gate valve and 44-inch tapers was installed between the No. 1 and No. 2 lines just west of the Pulgas pump station to increase flexibility of operation.

A permanent wall was built in the entrance to the Pulgas tunnel to provide for diverting small excess flows from one pipe when in use back into the other when empty, thus permitting this excess to be discharged into a creek channel and by this means providing better regulation and circulation. This procedure is most helpful in maintaining delivery to consumers on the line when it is required that no water be allowed to flow through the tunnel, such as when the Pulgas temple is being cleaned.

Cross-connections were installed on all services on the Bay Crossing lines so that consumers may be served from either line. This enables either one of the lines to be taken out of service to be chlorinated or for other reason. It also enables delivery of the better quality water when the lines are carrying different grades.

The Palo Alto pipe line delivered an average of 1.9 million gallons of water daily to consumers south of Redwood City. The maximum week's demand on this pipe averaged 4.2 million gallons daily. The only maintenance required was occasioned by settlement of paving over the trench at the Menlo Park station and along El Camino Real south of Stanford Avenue in Palo Alto.

The 44-inch Crystal Springs pipe line No. 1 was put in operation on April 21, 1940, after having been out of service since June, 1937. The return to service was made possible by the relocation of a section of pipe around the moving landslide area at Sierra Point, where it had previously been carried on an unstable suspension bridge. Two 24-inch cross-connections were installed between the No. 1 and No. 2 lines, one north and one south of Sierra Point.

The highway through North Burlingame was repaved by the State and risers on blowoff and air valves had to be raised on both Crystal Springs pipe lines to meet the new grade.

Considerable difficulty has been encountered in maintaining reasonably accurate Venturi meter recordings on the meters at each end of the No. 2 line. Otherwise the Crystal Springs pipe lines were operated without incident.

Delivery through the College Hill branch of the San Andres pipe line No. 1 was not allowed to exceed 7.5 million gallons daily and practically no trouble occurred. Past experience has shown that in this old line, in service since 1870, this maximum of 7.5 m. g. d. cannot be exceeded without causing leaks to develop. The deficiency in the delivery to College Hill was made up by diverting water from the San Andres 54-inch pipe through the Cross Town pipe. As time goes on, this demand may be expected to increase and the capacity decrease, necessitating supplementing the pipe facilities.

The Baden-Merced branch of the San Andres pipe line was in operation for 11 months of the year during which time it delivered from 7 to 9 million gallons of water daily. The line was shut down in June, 1940, to allow its relocation through the San Francisco Junior College property. A small amount of leakage past the gate valve supplied the few consumers south of the county line during the shutdown. No leaks occurred in this line during the year.

For the second successive year, no new leaks appeared on the San Andres 54-inch pipe line, though 5 old electrolysis leaks opened up and had to be re-plugged. This line now delivers water directly to the new Sunset reservoir in San Francisco.

Aqueducts:

The only maintenance work done on the Sunol aqueduct was to caulk a small leak in a joint between flume and tunnel.

At the Niles reservoir, the usual fire-guarding and checking the condition of the gate valves was done. The watchman's cottage was reshingled and the bathroom was rehabilitated.

Section No. 2 of the Stone Dam aqueduct is still out of use due to its deteriorated and slide damaged condition which was made considerably worse by additional slides during the past winter. Cost of repairing the existing structure would be such as to make an entirely new structure more practicable. Section No. 1, which now spills water into the Crystal Springs reservoir, was damaged last winter by a slide that took out 24 feet of flume near the outlet. This 24 feet of flume was rebuilt and repairs were also made at the tunnel No. 1 outlet.

Despite the very wet winter, there was no trouble with slides along the Crystal Springs canal. This freedom from slides was due to the installation of drain pipes and the removal of material at points that indicated potential slides. However, there are three places on the canal where pressure from slides has squeezed and damaged the lining. Temporary repairs have been made and permanent repairs should be made in the near future.

Peninsula General:

Indirect lighting fixtures were installed in all rooms of the office building and the exterior of the building was painted. Repairs were made to the interiors of the superintendent's house and the foreman's cottage.

A portable air compressor, together with various air-operated tools, was purchased and added to the Peninsula Division equipment. New equipment was also acquired to provide for testing large meters without removing them from service.

The department's telephone system operated throughout the year with no serious interruption of service and with only normal maintenance.

Alameda General:

The construction of a new highway bridge at the Sunol carfour and the removal of the old bridge on which the Sunol town supply pipe was laid required the laying of a new main across the creek bed. An 8-inch steel pipe line was laid. A number of small leaks were repaired in the light 4-inch riveted pipe of which the Sunol distribution system is mainly composed.

The temple picnic grounds were cleaned and 12 new tables, each seating six people, were added to care for the large number of week-end visitors. The Bonita picnic grounds were also well cleaned up and the toilets rehabilitated. During the spring and summer these grounds were very popular with Boy Scouts and other large groups.

Existing foundations under the superintendent's house and the guest cottage at Sunol were enlarged and some new foundations poured. All the underpinning had been damaged by termites and was replaced with termite-proofed underpinning. The guest cottage was reshingled and some of the rooms kalsomined. The interior of the office building was repainted and the old underpinning, damaged by termites, was replaced. The assistant superintendent's cottage was reshingled. A 16-foot addition was made to the warehouse in the corporation yard to provide more space for bluestone storage. An addition was made to the warehouse near the office to enlarge the gardener's room and the paint storage room. The old lath greenhouse was overhauled and a new one built to care for the increased planting around the grounds.

Alameda County Water District:

The abundant rains of the past winter produced floods in such quantity and manner that the seasonal percolation from Alameda Creek into the underground gravels of the Niles Cone, as computed by the Bailey formula, was approximately the same with storage in the Calaveras reservoir as it would have been with no storage. As a consequence it was not required that any of the stored water be released to the Alameda County Water District under terms of the 1920 award.

However, the "advance release" of water into the underground gravels of the district was continued in conformity with the agreement of September 24, 1936. During the past year, 1,455 million gallons of released water were absorbed by these gravels, bringing the total "advance release" to 17,995 million gallons on June 30, 1940. Of the past year's release, 835 million gallons were delivered through the Alameda pipe to the district's absorption pit near Centerville, 299 million gallons percolated from water released into the creek at Niles reservoir and 325 million gallons percolated from water released down Alameda Creek from above the U. S. G. S. gauging station near Niles. As indicated previously, these "advance releases" provide an underground storage reserve of an equivalent volume of water which can be drawn upon by the City in any emergency.

During the period May 21st to June 13th, 1940, it was necessary to discharge a portion of the Alameda Creek flow into the Bay through the Alameda pipe line while the district was replacing some 1,300 feet of open ditch leading to their absorption pit, with 30-inch concrete pipe; otherwise the department would have been obliged to pump this into Crystal Springs as against using gravity water from Calaveras.

The district continued throughout the year to augment their domestic supply with water purchased from the Water Department.

Pleasanton Township County Water District:

The department's "Town Well" was pumped to supply the town of Pleasanton to January 9, 1940, on which date the rising water table reached the point at which the department's obligation ceased. This condition lasted to July 3, 1940, when it again became necessary to resume pumping. The 3,000 feet of 10-inch slip-joint pipe through which this water is pumped continued to develop leaks. However, the bad sections are gradually being replaced and the number of leaks is decreasing.

The water level in the Hearst well remained high enough throughout the entire year to keep the department free of any obligation in connection with this supply.

The Water Department obligation, to pay pumping bills for "landowners" in the Pleasanton Township District under the old Spring Valley agreement, is governed by the water level in a "pilot" well located on the Mohr ranch, in the eastern end of the district. Since 1934 the Water Department has done no pumping at the Pleasanton well field other than a negligible amount to supply the town of Sunol. For parts of each of the past 3 years the gravel basin underlying the area has been full and overflowing through artesian wells in the lower end of the valley. Despite this favorable water level, the "pilot" well remained 5 feet or more below the elevation where the department is relieved from paying power bills and the Water Department has been obliged to pay the "landowners" pumping

CRYSTAL SPRINGS RESERVOIR

Algal growths, which have a tendency to produce objectionable tastes, are eliminated by treatment with copper sulphate applied through a spraying device designed and built by the department.

costs throughout the year, even for two "landowners" (Briggs and Baldwin) while they had wells flowing artesian into Laguna Creek for a period of six months—January 18th to July 10th, 1940.

Outside Meters:

The total number of suburban services was increased by one to a total of 621. However, among the services discontinued during the year, two were taken over by retail distributors of water purchased from the department. One of these was a 4-inch service to the San Mateo Community Hospital taken over by the California Water Service Co. and the other was a small service in Centerville taken over by the Alameda County Water District.

Tests of accuracy were made on several meters with the newly assembled equipment by means of which tests may be made without removing the meter from service. The meters tested were the 4-inch meter serving the California Nursery, the 6-inch meters serving the City of Palo Alto and the 4-inch meters serving the Moffett Field connection.

Street and road work necessitated the lowering of a 4-inch service on Borel Avenue in San Mateo and the resetting of 4 meters on Glen Avenue in Sunol.

CITY DISTRIBUTION DIVISION

Water Consumption:

The average daily consumption during the year was 68,576,407 gallons, an increase of 6,006,638 gallons more than the average of the previous year. For the City only the average daily use was 59,570,437 gallons, an increase over last year of 3,333,561 gallons per day, which is an increase of 5.9 per cent.

An increase in consumption occurred in all districts throughout the city ranging from a 13.9 per cent increase in the Forest Hill and Merced Manor districts to a 2.3 per cent increase in the Stanford Heights district. Of the larger districts, University Mound increased 8.2 per cent, Lake Honda-Sunset 3.3 per cent, and College Hill 11.6 per cent.

Expressed in totals instead of percentages, the average daily consumption increases in the various districts in gallons per day were: Forest Hill 45,816, Stanford Heights 162,539, Lake Honda-Sunset 769,284, College Hill 788,837, University Mound 1,485,842 and Merced Manor 81,243.

The University Mound district has ample capacity both in the incoming supply lines and the terminal storage or distributing reservoir. A new 60-inch supply line and a new reservoir basin of 81.5 million gallons was built under the P. W. A. bond issue program. The Merced Manor district also has adequate storage and supply.

During the year the Sunset reservoir was put into active service, this reservoir replacing Lake Honda as the main storage or distributing reservoir in the Lake Honda-Sunset district. The old Lake Honda reservoir was rendered inactive for operating or regulating purposes though it will still carry reserve storage. To put it back into active service coordinated with Sunset will require complete rehabilitation including raising the water surface thirteen feet to conform to the level of the water in Sunset reservoir.

The storage in the Forest Hill tank is inadequate. During the year a breakdown in the pumping station left the district without water for most of one day. The residential character of this area with its high peak load during the dinner period draws the water level of the tank down to a point that does not leave enough water in the tank for adequate fire protection. Increased capacity in tanks, pumps and force main is an urgent necessity.

The College Hill district is still dependent on the little old reservoir constructed in 1870 which holds only one and one-half days' supply for the area served. This supply still comes through a portion of the original pipe line, also built in 1870, and which will not hold together much longer. A new reservoir and a new supply line is badly needed.

The consumption in the Stanford Heights district has now reached a point where the reservoir holds only a one day supply and the present steam driven pumps are operated to capacity. During the coming year, temporary electric pumps will be installed which will relieve the shortage in pump capacity but there still remains the problem of furnishing adequate storage supplying water to all parts of the slopes of the Twin Peaks and adjacent hills.

The problem, the seriousness of which has increased rapidly with the growth of the district, is that of furnishing a pressure that is sufficient for adequate service but which is not too high to be undesirable with ordinary plumbing installations. At present this area can only be supplied from Sunset reservoir at an elevation of 385 feet or from Stanford Heights at an elevation of 614 feet. This difference in elevation is equal to 100 pounds pressure so that a home with say 25 pounds pressure from Sunset reservoir which is approaching the lower limit at which satisfactory service may be expected, must receive service at a pressure of 125 pounds if transferred to the Stanford Heights. While house piping and fixtures in good condition will safely withstand this pressure it is beyond the limit of what may be considered desirable.

This pressure condition can be corrected and the necessary additional storage capacity obtained by constructing a new reservoir at an elevation of approximately 500 feet. Such a reservoir was long ago planned by the Spring Valley Company to be located just east of Dewey Boulevard. This particular site, however, was developed for homes, but another one is available which should be acquired before it, too, gets put to other uses.

The 54-inch supply line from San Andres is now carrying 35 million gallons a day during the warm weather. The maximum capacity of the line is 39 million gallons per day. A new pumping station to lift water from University Mound reservoir, which has an excess supply capacity at present, to the Sunset reservoir, will for the time being as a more or less temporary arrangement insure the necessary supply to the Lake Honda district and also to the College Hill district in the event that the old San Andres pipe line should become unusable. This additional capacity, however, can only be considered as temporary as the cost of pumping the water will soon overbalance the fixed charges on a new pipe line, while at the same time the demand on the University Mound supply will continue to increase.

Transmission Mains:

During the year the San Francisco State Teachers College purchased a portion of the Lake Merced ranch across which the Baden-Merced pipe line was laid. In order to better develop their property, the college authorities gave to the City a new right-of-way along the boundaries of the college tract and paid all of the costs of relocating the pipe line, including the purchase and installation of about 400 feet of new 30-inch pipe. The relocated line was put back into service in July, 1940.

Those portions of both Crystal Springs Transmission lines and the San Andres 54-inch pipe line within the City operated throughout the year without trouble. On the old portion of the original San Andres pipe line to College Hill several breaks occurred and were repaired.

When Sunset reservoir was placed in service the old tunnel and the Lake Honda screen house went out of use. The screen house tank was put back into service as a regulating basin for the Forest Hill pumps.

City Reservoirs:

The only matter of note during the year was the fact that the new Sunset reservoir came into and the old Lake Honda reservoir went out of active service on February 7, 1940.

The usual maintenance work was done as it became necessary, but all of it was of a minor nature.

The W. P. A. have been working on the landscaping of the grounds around the Sunset reservoir, but have not started their work at University Mound.

The new basin at University Mound was put into regular service on November 9, 1939.

Lake Merced:

No water was taken from the lake. The W. P. A. road work is finished, the boulevard being completed around the lake with connecting links to Junipero Serra and Alemany Boulevards.

The fishing concession is still operating. The United States Coast and Geodetic Survey constructed a compass testing station on the south shore of the North lake.

On February 29, 1940, the lake overflowed for the first time since 1892.

Pumping Stations:

Central pumps operated throughout the year pumping 2,676,500,000 gallons into Stanford Heights reservoir. During the year the pumps were overhauled, one new impeller installed, and two ordered which will be installed when they are received. The machinery and building are in good condition.

A new small pump station was installed adjacent to Lake Honda to pump water up to the Forest Hill pumps as the previous source of supply for these pumps was cut off when Sunset reservoir was put into service. The tank of the screen house is utilized as a regulating basin between the new Lake Honda pump and the Forest Hill pumps.

The large Forest Hill pump had the bottom break out of its No. 2 cylinder. This was repaired and the pump as repaired will probably be capable of operating for a long time, but as all of the pumps in this station have seen long service and are reaching a condition of obsolescence due to capacity and age, new units should be installed at a not too distant date.

The old Black Point building was wrecked, so that for the first time in the history of San Francisco's water supply no pump station is in the old Black Point pump lot.

All of the machinery in the Clarendon Heights station was sold and removed, and the building converted into use for storage of records.

Meter Expense:

During the year meters and meter settings were repaired as required. There were 3,595 meters changed and 578 brought home.

Street Department Expense:

The routine work of blowing-off dirty water and answering miscellaneous complaints was carried on during the year. Nothing unusual occurred.

Machine Shop:

The machine shop has been active during the year.

Service Connection and Meter Installation:

During the year, 3,742 domestic services were installed. Many of them were put in prior to paving the street, and not all were put to use. Of these, 3,653 were ¾-inch in size, 31 1-inch, 18 1½-inch, 16 2-inch, 10 3-inch, 7 4-inch and 7 6-inch.

MILLBRAE LABORATORY
Purity of the San Francisco water supply is assured by daily checks made in this laboratory.

There were also set 4,165 meters, some on the services as installed and some as they were put to use.

City Pipe System:

A detailed record of the pipe laid is given in the appendix. Only routine work was done, no large or unusual mains were laid.

WATER PURIFICATION DIVISION

The activities of the Water Purification Division have continued to expand, an increased volume of work has been handled, and much time and work devoted to research and special investigations. Again as in the previous year two vacancies in the staff were created by resignations to accept more lucrative positions elsewhere. These positions were filled with new men in January, but the division was obliged during the first half of the fiscal year to operate with a somewhat undermanned staff. Special studies were carried out relative to chlorination of our water; a large amount of work was performed in connection with litigation; the cross-connection survey program previously initiated was extended, and some work was done in cooperation with officials of the Golden Gate International Exposition relative to treatment of water supplied the Island.

Laboratory:

The laboratory and Purification Division office continue to be housed in the old pump station at Millbrae. The interior of this building was painted during the year and a few new lighting fixtures installed, also some new equipment has been purchased and rearrangement of some of the laboratory fixtures has been made. The present quarters are somewhat cramped and not well adapted for the work of the division. Plans should be made to provide a new building for the laboratory in the near future.

Following is a tabulation of the samples examined in the laboratory during the fiscal year:

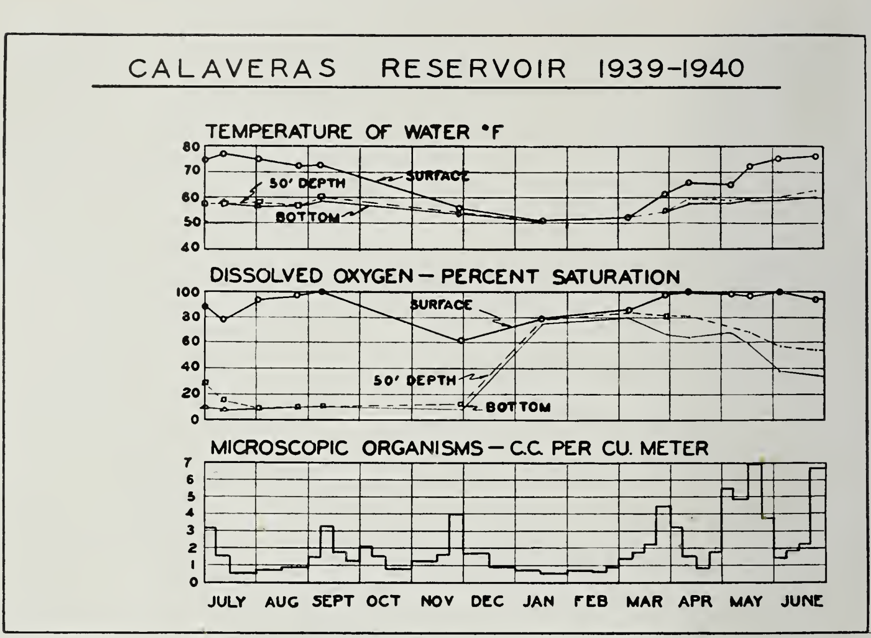
Bacteriological Examinations	3,944
Microscopical Examinations	520
Filamentous Organisms, Inoculations and Examinations	4,916
Complete Mineral Analyses	141
Partial Chemical Analyses	383
Complete Soil Analyses	48
Nitrogen Cycle Determinations	6
Boron Determinations	242
Dissolved Oxygen Tests	418
Miscellaneous Field Chemical Tests	3,820
Electrical Conductivity Measurements	2,270
Tests on Zeolite Sands	34
Coagulation Experiments	85
Break Point Chlorination and Chlorine Demand Tests	191
Tests on Materials for Sealing Reservoir Linings	75
Corrosion Tests	464
Miscellaneous Laboratory Tests Not Otherwise Included	105
Tests to Determine Origin of Leaks	47
Complaint Investigations (Field and Laboratory)	180

Chlorination:

Chlorination of the water supply has been continuous at all regular stations during the year. Throughout the system there are in operation or reserve a total of twenty-four chlorinating machines and eight ammonia machines at eleven stations.

The Tesla Portal chlorinating plant operated from July 1, 1939, until April 19, 1940, when delivery of flow from Hetch Hetchy was discontinued for the season. This station, one of the largest chlorine-ammonia plants in the country, has operated satisfactorily throughout the period and has produced the desired results. The chlorine plant at Lake Honda Reservoir was shut down on February 7, when this reservoir was placed in reserve. Chlorination at the new Sunset Reservoir is not necessary as the reservoir is covered.

The manual control chlorinating machine at College Hill was converted to an automatic machine during the year by means of a timing device developed and built in this department. This has resulted in improved operating conditions at College Hill. A portable chlorinating unit maintained by the department was used several times during the year to sterilize mains; use was also made of this machine a number of times to sterilize the pipe leading from our Palo Alto line to the air base at Moffett Field. This work was done at the request of the U. S. Army and paid for by them. A feeding device was manufactured in the department's shops to feed sodium hexametaphosphate into the machine-feed water for the


CALAVERAS RESERVOIR 1939–1940

ammoniator at Crystal Springs to prevent scale formation. Use of this chemical for this purpose has been entirely satisfactory in eliminating necessity of shutdowns to clean the machine.

All chlorine equipment has been maintained in first-class condition throughout the year and shutdowns have been infrequent and of short duration.

Algae and Weed Control:

The peninsular reservoirs have been maintained at fairly high levels throughout the year and the quality of water withdrawn has been generally satisfactory. Calaveras Reservoir reached a fairly low stage in the fall of 1939 but the quality of water remained good. Copper sulphate treatments of the reservoirs have been made as required, averaging two treatments per reservoir for the year. Microscopical examinations of samples from the reservoirs are made twice each week and biological studies of reservoir water have been made every two weeks throughout the year. The results of these tests and examinations are shown on accompanying charts. Two new copper sulphate dispensing machines of a type developed by this department were built for use on Calaveras Reservoir. All of the storage reservoirs are now equipped with these machines and their operation has been highly satisfactory, resulting in a material saving in cost of treatment. Similar machines modeled after these are now being made by the Metropolitan Water District for use on their reservoirs.

Open distributing reservoirs in the city distribution system continue to cause considerable trouble with weeds, College Hill Reservoir being the worst offender. This reservoir develops a heavy weed growth every year, giving rise to bad tastes and odors which are accentuated by the work of removing the weeds, causing many complaints. A weed and algae growth developed in Lake Honda Reservoir during the late Summer of 1939, resulting in many complaints. Efforts to treat this growth chemically were unsuccessful. Open distributing reservoirs will continue to give trouble of this type as long as they are kept in use. All new reservoirs constructed are of the covered type and with these trouble of this nature is avoided. All open reservoirs which are to be continued in regular service should be covered as funds are available.

Filamentous Organisms:

Trouble from growth of slimes and other filamentous organisms has been satisfactorily eliminated by the chlorine-ammonia treatment applied at the Calaveras and Tesla Stations. Inspections of the Bay Crossing pipe lines were made several times during the year which showed that the control of the growth was effective. An inspection of the Coast Range Tunnels of the Hetch Hetchy aqueduct also indicated that the growth which had previously given trouble in this location was entirely under control. Constant diligence is necessary to prevent recurrence of this trouble and a great deal of research and experimental study has been carried on in connection with this problem. Six small experimental treatment plants have been in operation at different points of the system throughout most of the year to further the study of this particular growth.

REPORT OF LABORATORY EXAMINATIONS

Week Ending June 29, 1940

Source of Reservoirs	Max. Agar Count 37° C	Coliform Group 10cc Por.			Chemicals p.p.m.			pH	Turbidity	Date Sample Pos.
		No. Ex'd	No. Pos.	% Pos. Year	Alk.	Cl.	Hard.			
Early Intake	480	5	5	36.0	4	1	4	6.9	1—	6–27
Priest Reservoir	5	5	0	41.9	4	1	4	6.9	1—	
Moccasin Reservoir	700	5	5	69.1	4	1	4	6.9	1—	6–27
Crystal Springs Lake	1	5	0	34.8	56	9	62	7.3	7	
San Andres Lake	2	5	0	44.6	58	12	70	7.4	3	
University Mound Reservoir	18	10	2	15.8	56	9	62	7.3	7	6-24 (1) 6-27 (1)
College Hill Reservoir	70	10	7	59.0	58	12	70	7.4	3	6-24 (5) 6-27 (2)
Sunset Reservoir	4	10	0	13.1	58	12	70	7.4	3	
Treated Waters										
Niles Reservoir	2	5	0	0.4	218	37	260	8.0	1—	
Hetch Hetchy Aq. Bay Crossing	1	5	0	2.9	84	7	92	7.8	3	
Palo Alto Pipe Line	14	10	0	0.7	84	7	92	7.8	3	
Crystal Springs Line	4	30	0	1.0	56	9	62	7.3	7	
Alameda Line, Belmont	2	5	0	0.0	56	9	62	7.3	7	
San Andres Line	2	30	0	1.3	58	12	70	7.4	3	
No. San Andres Line	2	30	0	0.3	58	12	70	7.4	3	
University Mound Inlet	4	10	0	1.5	56	9	62	7.3	7	
University Mound Outlet	2	10	0	1.1	56	9	62	7.3	7	
University Mound System	12	10	1	1.9	56	9	62	7.3	7	6–24
College Hill Inlet	1	10	1	2.4	58	12	70	7.4	3	6–24
College Hill Outlet	2	10	0	1.9	58	12	70	7.4	3	
College Hill System	25	10	0	1.4	58	12	70	7.4	3	
Sunset Inlet	3	10	0	1.4	58	12	70	7.4	3	
Sunset Outlet	2	10	0	0.8	58	12	70	7.4	3	
Sunset System	2	10	0	0.0	58	12	70	7.4	3	
Central Reservoir	8	10	0	0.6	58	12	70	7.4	3	
Stanford Heights Reservoir	3	10	1	0.6	58	12	70	7.4	3	6–27
Stanford Heights System	2	10	0	0.2	58	12	70	7.4	3	
Lombard System	48	5	1	8.6	58	12	70	7.4	3	6–24
S. F. Airport	6	10	0	0.2	56	9	62	7.3	7	
Sunol Town Supply	2	5	0	1.2	223	38	265	8.0	1—	

Remarks: All water supplied to consumers conforms to standards.

SAN FRANCISCO WATER DEPARTMENT

MINERAL ANALYSES

(Results expressed in parts per million except pH)

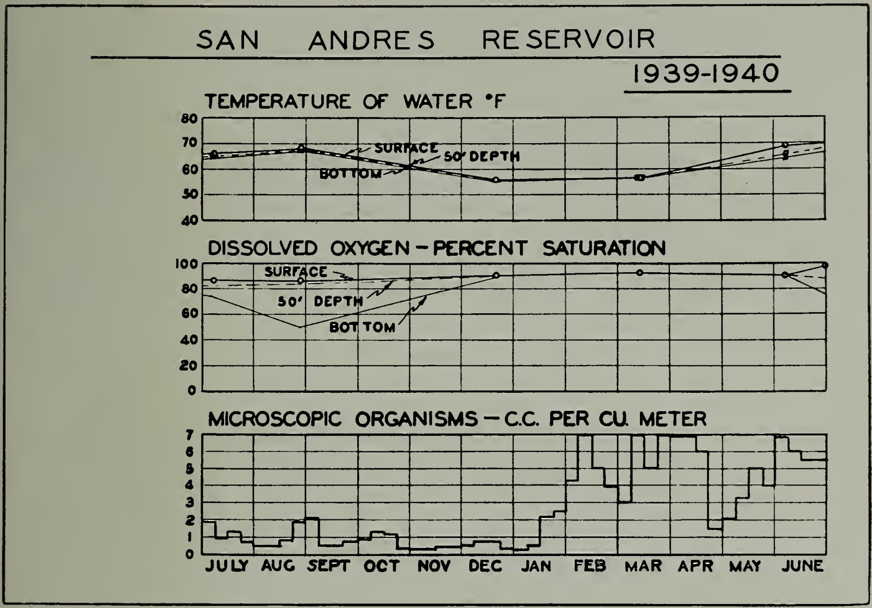
Source	Crystal Springs Line	San Andres Line	Calaveras Reservoir Outlet	Hetch Hetchy Aqueduct
	Date Sampled			
	5-2-40	5-2-40	4-22-40	4-19-40
Turbidity	9	8	10	1
Conductivity ($Kx10^5$)	16.2	17.8	21.2	9.5
pH	7.3	7.6	7.4	7.0
Total Solids	96	105	125	58
Nitrate (NO_3)	0.35	0.22	2.2	0.13
Boron (B)	0.08	0.04	0.05	0.32
Silica and Insolubles	8.5	9.4	8.7	8.5
Sodium (Na) (Direct)	8.40	10.3	8.05	7.48
Calcium (Ca)	14.1	15.1	23.1	5.7
Magnesium (Mg)	6.45	7.17	8.17	1.91
Iron, Dissolved (Fe)	0.02	0.02	0.03	0.03
Aluminum (Al)	0.4	0.5	0.58	0.14
Manganese (Mn)	0	0	0	0
Bicarbonate (HCO_3)	66	71	100	24
Carbonate (CO_3)	0	0	0	0
Sulphate (SO_4)	10.5	11.0	15.9	11.7
Chloride (Cl)	9	13	5	6
Hardness, Calculated $CaCO_3$	61.8	67.3	91.3	22.1
Alkalinity as $CaCO_3$	54	58	82	20

Column 1 supplies downtown, commercial, waterfront areas of the city.

Column 2 supplies residential areas of the city.

Column 3 supplies peninsular communities only.

Column 4 not in use at present time.



Training School:

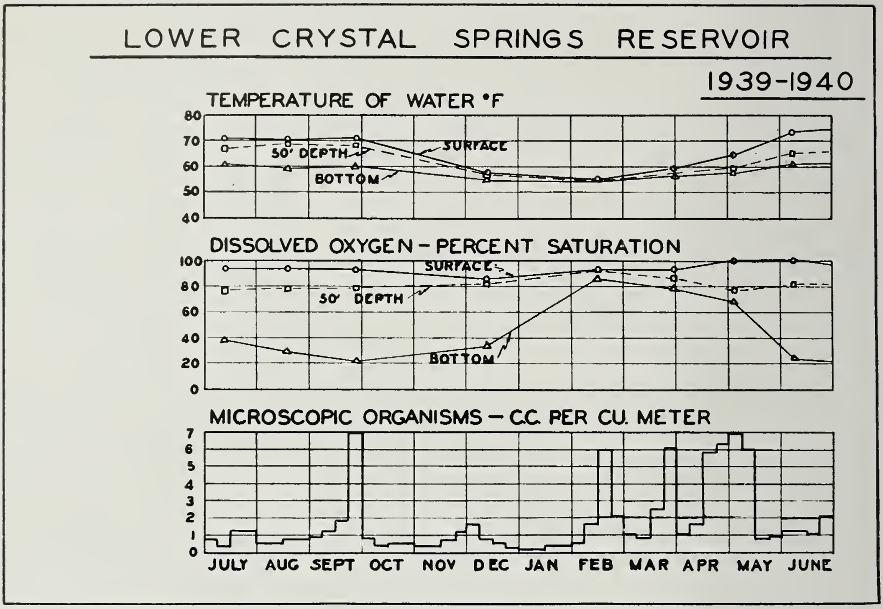
Training activities this year were confined to individual instruction of certain employees whose work is related to purification, treatment, or dealing with the public. One lecture was delivered at the Mason Street building to a large number of the employees. The employees have expressed an interest in this type of instruction and an enlargement of the program is contemplated.

Cross-Connections:

The protection of the San Francisco water supply against possible contamination by other sources of water supply and other hazards has been continued during the year. The survey of plumbing hazards was extended considerably during the year, going into new fields. All of the city's hospitals were thoroughly surveyed for plumbing hazards and other related sanitary menaces. Most of the hospitals have complied with the recommendations made by the engineers and conditions have been improved generally. Following the hospital survey, the public schools were examined in the same manner. The program of inspection and correction has also been extended to mortuaries and some industrial plants. It is expected to continue this work until all buildings in the city have been covered.

Complaints:

The number of bad water complaints received from consumers during the year shows an increase over last year due to conditions of algae and weed growth previously referred to, which developed and which were unavoidable. The cutting and removal of weeds from College Hill Reservoir basin each year results in a



large number of complaints in the fall. The summer of 1939 being exceptionally warm, the weed growth was heavier than usual, resulting in a corresponding increase in the number of complaints. An algae and weed growth developed in Lake Honda distributing reservoir during July and August which occasioned some complaint from taste and odor. Chemical treatment of this water was ineffective in removing the trouble, but with the incidence of cool weather in the fall, the trouble disappeared. Many complaints of turbid water were received in the spring of 1940 due to the fairly high turbidity in the peninsular storage reservoirs resulting from the heavy rains. The rainfall of the winter 1939-40 came within a comparatively short time and was of high intensity resulting in a more turbid condition in the storage reservoirs than usual. A complete filtration system for the water supply presents the only means of thoroughly eliminating the seasonal turbidity of the water and correcting of many of the other causes of complaint, but due to the initial expense involved, this must be some years ahead. Some complaints are received from consumers served from the mains near "dead ends" of the pipe in the distribution system. Repeated flushing of these "dead ends" is the only present means of improving this condition. The Purification Division has been called on to investigate many of these complaints and has also investigated difficulties encountered by industrial plants.

Corrosion:

Study of the problem of pipe corrosion has been continued along the lines outlined in the last annual report. These studies have been curtailed to some extent due to press of other work but observation of the corrosive effect of the various waters on test specimens is being continued, both in the laboratory and in the field. The experimental plant installed several years ago at Hetch Hetchy junction for introducing a small amount of lime into the water to reduce corrosion was not operated during the fiscal year as funds were not available. The study of the effect of lime treatment on Hetch Hetchy water, however, has been continued in the laboratory and data are being accumulated which will be of future value.

Exposition Studies:

In cooperation with officials of the Golden Gate International Exposition, a number of problems in connection with the water supply of Treasure Island were investigated by the Purification Division. Operating difficulties in connection with the lagoons and the fountains on the Fair grounds were studied and recommendations were made to the Exposition officials for treatment of the water supply to overcome these difficulties.

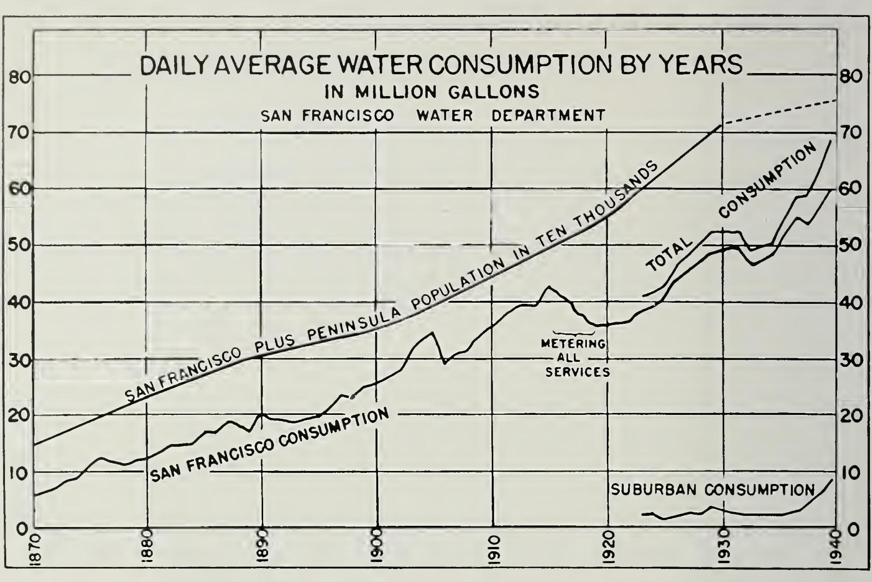
General:

The Purification Division has been called on for service by other divisions of the Water Department and other city departments. An investigation of the water supply at Camp Mather was made for the Recreation Department. A large amount of work has been done in connection with litigation for the Hetch Hetchy Department. The cross-connection surveys in the hospitals and other buildings and institutions have been a cooperative activity with the Department of Public Health, plumbing installations being under jurisdiction of that department. These services cited are typical and indicative of the value of the activities of this division to the City aside from its work in its particular field of water purification for the department.

WATER SALES DIVISION

Gross Water Sales for the fiscal year were $7,286,064. After deduction of allowances, refunds and losses amounting to $20,878, net sales were $7,265,186, an increase of $246,122 or 3.5 per cent, as compared with the fiscal year 1938-39. Suburban accounts increased $33,217 and San Francisco accounts $212,905. Revenue from the new Palo Alto pipe line amounted to $88,509 for a metered delivery of 77,939,000 cubic feet. The number of active consumer accounts on June 30, 1940, was 120,829 as compared with 117,189 on June 30, 1939, an increase of 3,640. Deliveries of water to the Golden Gate International Exposition valued at $5,233 in 1937-38, $29,800 in 1938-39 and $40,610 in 1939-40 are not included in sales. In connection with the sales record, comparison of charges for the past two years is shown in Non-Paying Municipal Accounts. These sales for the year 1939-40 totalled $500,494 as against $476,352 for the year 1938-39, an increase of $24,142. This does not include charges of $24,748.82 against the Recreation Commission, which though heretofore classed as a paying account, during the current year failed to make any payments for water service. Of the increase shown, $19,508 is in Public Parks usage and $2,462 in Improvement Association Irrigation Service.

The total amount of bills in Suspense is $5,258.17, representing a slight decrease. Bills written off during the period amounted to $3.673.37, a decrease from the previous year of $802.71. Of the total written off, $1,587.60 is accounted for in Board of Trade and Bankruptcy proceedings as compared with $1,489.15 in the preceding fiscal year. We hold in active suspense those accounts for which we received dividends or partial payments from the Board of Trade or from Receivers until such time as they are definitely closed issues; any remaining unpaid balances are then included in write-off. Accounts totalling $2,662.93 are now being handled in this manner.



The record of service and distributor installations shows 4,312 as against 3,395 last year, an increase of 917 or 27.0 per cent. There are 122,800 active services, all metered, of which 120,219 are revenue producing and 2,581 are temporarily shut off, an increase of 3,587.

Building permits issued for the year show a loss of 53, for a decrease of $1,902,246 chiefly accounted for through completion of Exposition building. Permits issued for the year were 8,609 for a total of $25,439,920. Frame structures almost wholly residential construction account for 56.3 per cent of the value shown, reflecting continued activity in home building. A total of 3,899 jobs handled indicated an increase of 613 over the previous year. The work represents inspection of an average throughout the year of some 955 residences in course of construction, schools, playgrounds, installation of distributing mains, street widening, grading and paving in subdivisions and construction of new boulevards. Major jobs followed during the period were the three Federal Housing projects, Holly Park recently completed, Potrero and Sunnydale.

Our collection record indicates but slight change compared with last year. The ratio of collections to net sales for the fiscal year 1939-40 was 92.3 per cent, a decrease of one-tenth of one per cent. Branch Bank agencies numbering 91 collected 34.5 per cent of the total bills issued, an increase of 1.1 per cent. Our regular department collectors handled 80.8 per cent of the bills issued, and collected 28.0 per cent, a decrease of seven-tenths of one per cent. The average number of bills handled by regular collectors per man-day has decreased from 237 last year to 230 and the average collected per man-day from 68 to 64. Activity of our motorized special collector continues to show favorable results. The record shows that 63.1 per cent of the total bills handled were collected as compared to 63.2 per cent the previous year.

The collection procedure remains the same, including the use of a third Shut-Off Collector to offset the loss of effort in this phase of collections due to the necessity of using one of these men for emergency relief when illness or accident deprives us of the services of a Shut-Off Man in the Service and Supply Section. His services are also required to help absorb heavy demand in outside activity of this section for two or three days twice each month at which times there is peak movement of consumers to new addresses. This plan has assisted, in part, at least, in reducing the percentage of delinquent bills.

Delinquent bills as of June 30, 1940 carrying unpaid balances of one month or more decreased 1.0 per cent. Result of consistent effort to reduce the amount of unpaid balances is shown in a percentage comparison of total delinquencies on June 30, 1940, as follows:

1937	25.3 per cent	1939	24.0 per cent
1938	25.1 per cent	1940	23.0 per cent

Statistics and data relative to the activities of the Sales Division are appended.

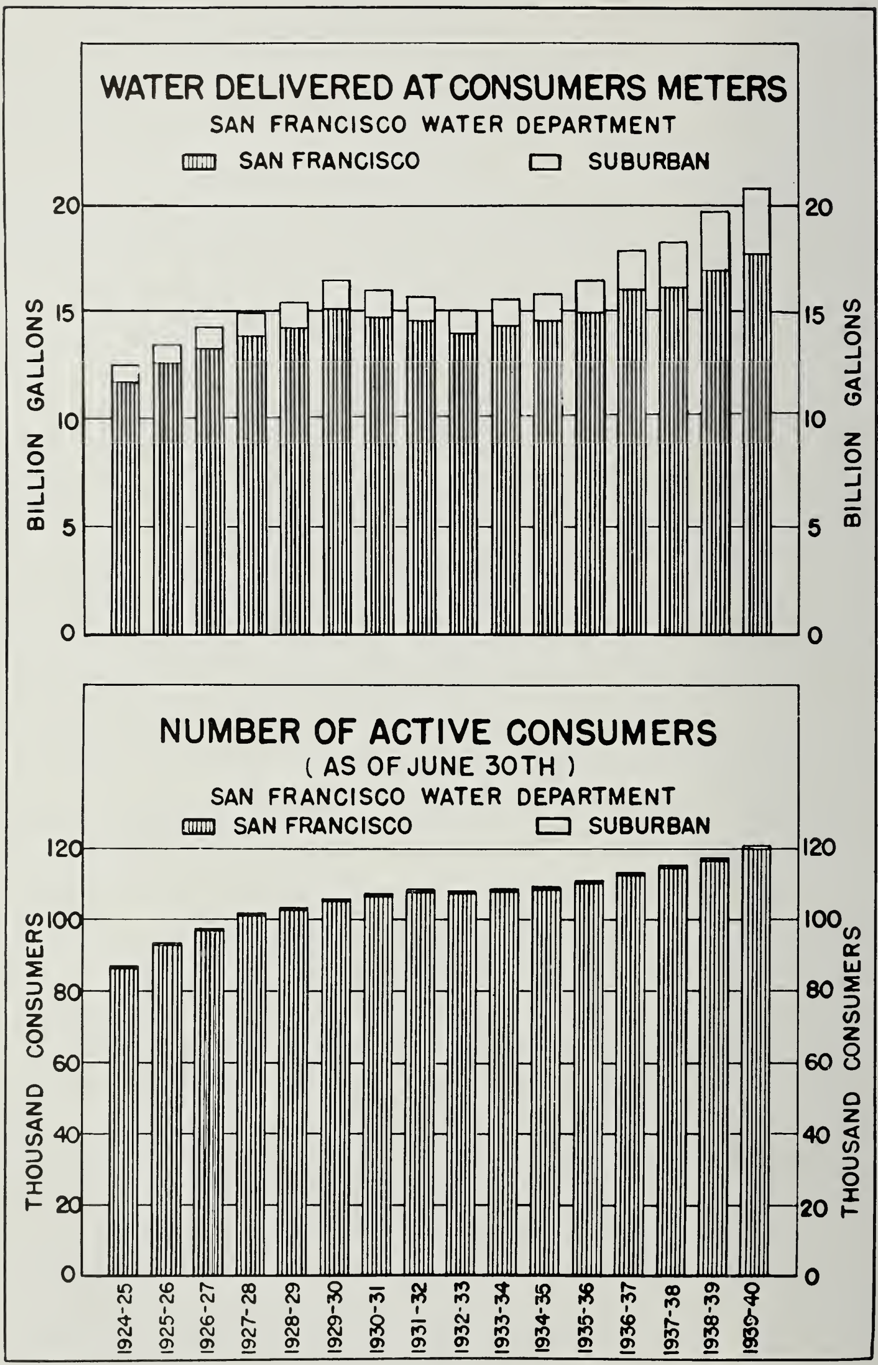
ENGINEERING DIVISION

Plans and specifications were prepared for 42 formal and 3 informal Water Department contracts which were awarded for a total estimated amount of $249,137.15. Engineering, supervision and inspection services were provided on 39 jobs totaling $354,024.02 of contract work performed during the year.

Comprehensive studies were made to determine the most economical and practical method of providing additional facilities for bringing water in from the peninsula, in order to meet the rapidly increasing demands of the higher level distribution districts in San Francisco. Existing facilities were operated at peak capacity in order to maintain an adequate supply to these districts during the hot weather periods of 1939. Increased supply to these higher districts must be provided for in the immediate future. The tentative plans evolved for meeting this need have been correlated and incorporated in a long range program designed to meet the probable future construction needs of the Water Department system as a whole, in an orderly and economical manner.

A number of the more essential extensions included in this program are here listed together with the estimated cost of the several items and the date when funds should be available.

Item	Estimated Cost	Funds Needed Budget
Normal Extensions—Distribution System	$500,000 Annually	
New Transmission Line—San Andres to Sunset—$2,602,000.		
(a) New Reservoir Outlet	470,000	1940-41
(b) New 60″ Line—Section 1	1,065,000	1941-42
(c) New 60″ Line—Section 2	812,000	42-43; 43-44
(d) New 60″ Line—Section 3	255,000	1944-45
Enlarge Crystal Springs Pumps and Canals to San Andres—$305,000.		
(a) Pumps and Force Main	105,000	1942-43
(b) Canal Enlargement	200,000	1942-43
Distributing Reservoir—500′ Level, for Relief of Stanford Heights, etc.—$700,000.		
(a) Reservoir	350,000	1940-41
(b) Supply and Discharge Pipe	350,000	1941-42
Balboa Reservoir—$800,000.		
(a) Excavation, Embankment and Pipes	300,000	1943-44
(b) Concrete Work—Completion	500,000	1944-45


WATER DELIVERED AT CONSUMERS METERS
SAN FRANCISCO WATER DEPARTMENT
SAN FRANCISCO
SUBURBAN
BILLION GALLONS
0
5
10
15
20
NUMBER OF ACTIVE CONSUMERS
(AS OF JUNE 30TH)
SAN FRANCISCO WATER DEPARTMENT
SAN FRANCISCO
SUBURBAN
THOUSAND CONSUMERS
0
20
40
60
80
100
120
1924-25
1925-26
1926-27
1927-28
1928-29
1929-30
1930-31
1931-32
1932-33
1933-34
1934-35
1935-36
1936-37
1937-38
1938-39
1939-40

This program and the dates set forth are based on the normal increase of water requirements in the district involved. Any abnormal increase in demands, such as might ensue from an intensive military preparedness program, or the abandonment of the Park's local water supply system, would automatically advance the dates for the completion of the items involved and correspondingly the dates when funds would be required.

A booklet was compiled containing the Department's "Standard Specifications for Laying Cast Iron Mains," adopted by the Public Utilities Commission in February, 1940. Since that time, these specifications, by reference, have been made a part of all contracts for laying cast iron pipe. This has reduced the size of the bound volume of specifications required for each contract from an average of 85 pages, as heretofore necessary, to less than 30 pages, which contains only the special provisions relating to the particular work involved.

Experimental work was carried on in an effort to eliminate excessive external corrosion to the Bay Crossing Pipe Lines in certain areas or localities. Extensive tests were made during the year and initial installation of a cathodic corrosion eliminator was made near Newark. This is to be followed shortly by the installation of a second eliminator in the same vicinity.

A considerable amount of work was done for other city-owned utilities. As customary, photograph and photostat service was rendered throughout the year for all departments of the Public Utilities Commission. Work performed for the Hetch Hetchy project included preparation of preliminary plans for a new keeper's cottage at Lake Eleanor and a sluiceway at Early Intake. Engineering services for the Municipal Railway included the preparation of plans and specifications for a $40,000 addition to the 17th Street division to house and service trolley buses; specifications and supervision for remodeling the general offices in the Geary Street car house at an estimated cost of $9,000; and a preliminary study and layout for motor bus and street car shops and bus storage at Ocean and Phelan Avenues.

Various other work involving preparation of property descriptions and reservations for real estate transactions and the general operation and maintenance of the Water Department was carried on.

A brief description of the construction work performed under contract during the past year follows:

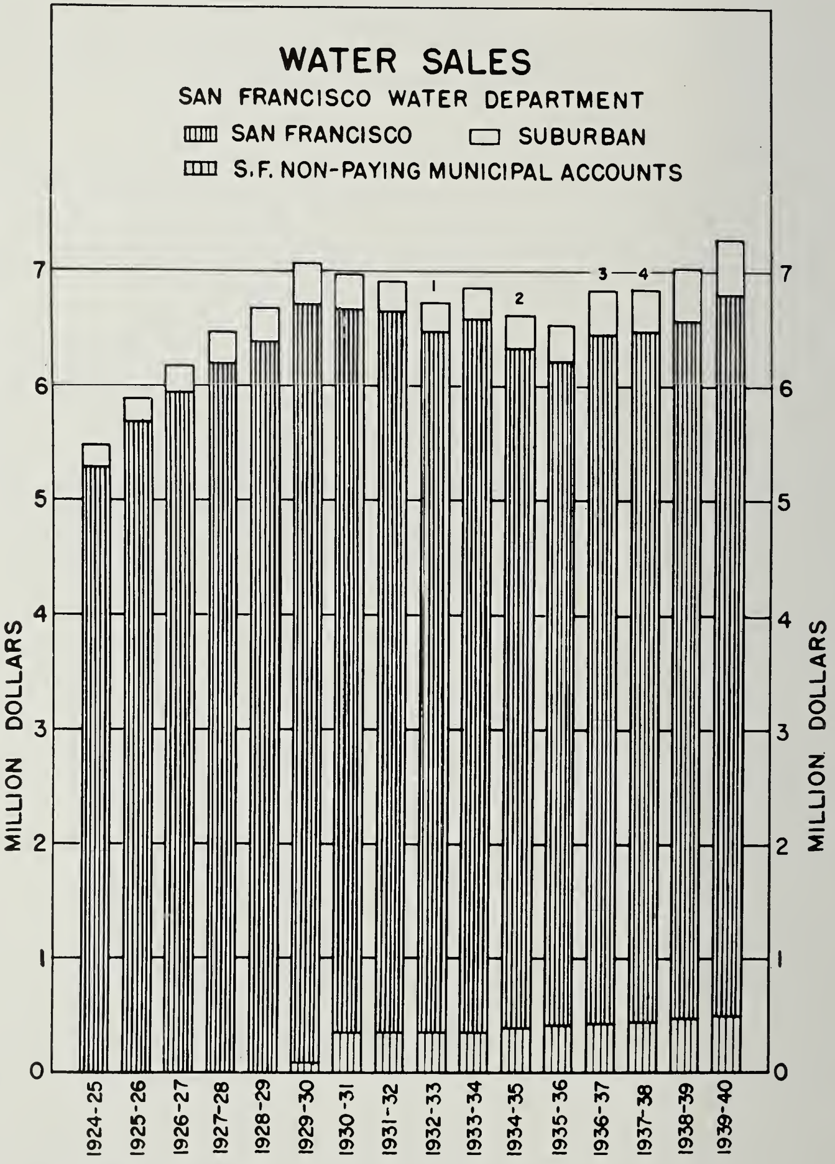
A—Formal Contracts

1. Additions to City Distributing System:

In all contracts involving the laying of cast iron pipe or the installation of services, the contractor is required to obtain the pipe and fittings from the Water Department. The cost of this material together with engineering and inspection costs are included in the following stated contract costs.

Contract No. 197—Covered the laying of 495 feet of 6-inch cast iron pipe and the installation of 18 services in Melrose Avenue and Los Palmos Drive. This contract was awarded to E. J. Treacy on December 27, 1938, and due to delay of other contractors in bringing Melrose Avenue to grade, was not completed until July 24, 1939. Cost of this contract was $1,252.60.

Contract No. 209—Provided for the laying of 550 feet of 6-inch cast iron pipe in Day Street, Castro to Noe, and for 1,750 feet of 8-inch cast iron pipe in Delta



WATER SALES

SAN FRANCISCO WATER DEPARTMENT

RATE REDUCTIONS:

1 OCT. 26, 1932 – 75% ON FIRE SPRINKLER SERVICE CHARGES.
2 DEC. 1, 1934 – 10% ON ALL RATES EXCEPT HYDRANTS AND SPRINKLERS.
3 JAN. 1, 1937 – 7% & 48% ON INCREASED USAGE AT INDUSTRIAL & WHOLESALE RATES.
4 JAN. 1, 1938 – 7% & 48% APPLIED TO ALL " " " " "

Street, Leland to Wilde. The contract was awarded to W. J. Tobin on August 14th and work was completed September 5, 1939, for a contract cost of $5,572.54.

Contract No. 211—Covered the installation of 44 services and the following cast iron pipe in Miraloma Park:

340 feet of 6-inch in Melrose Avenue, Lulu to Gennessee
232 feet of 6-inch in Los Palmos Drive, from Lulu west
127 feet of 8-inch in Burlwood Drive, from Lulu west

The contract for this work was awarded to W. J. Tobin on July 10th and was completed July 24, 1939, for a cost of $1,502.94.

Contract No. 212—Covered the installation of 134 services and the following cast iron pipe in the Sunset District:

676 feet of 6-inch in 32nd Avenue, Moraga to Noriega Streets
600 feet of 6-inch in 34th Avenue, Moraga to Noriega Streets
600 feet of 6-inch in 35th Avenue, Moraga to Noriega Streets
288 feet of 8-inch in Moraga Street, 34th to 35th Avenues

The contract was awarded to W. J. Tobin on July 24th and work was completed August 8, 1939, for a cost of $4,314.53.

Contract No. 213—For the laying of 960 feet of 6-inch cast iron pipe and the installation of 27 services in Randolph Street, Chester Avenue to Worcester Street, was awarded to Martin Murphy on August 1, 1939. Work was completed September 5, 1939, for a cost of $1,762.15.

Contract No. 214—Provided for the laying of 204 feet of 4-inch and 131 feet of 6-inch cast iron pipe in Rodgers Street from Folsom Street south. This contract was awarded to E. J. Treacy on August 9th and was completed August 26, 1939, for a cost of $929.94.

Contract No. 215—Covered the installation of 38 services and the laying of 659 feet of 6-inch cast iron pipe in 35th Avenue, Vicente to Wawona, and 505 feet of 8-inch cast iron pipe in Wawona Street, 34th to 36th Avenues. The contract was awarded to W. J. Tobin on July 24, 1939, and was completed August 14, 1939, for a cost of $2,163.67.

Contract No. 217—Provided for the laying of 208 feet of 4-inch cast iron pipe in Modoc Avenue from Cayuga north, the laying of 261 feet of 8-inch cast iron pipe in Cayuga Avenue from Foote to Modoc Avenues, and the installation of 25 services. This contract was awarded to E. J. Treacy on September 11, 1939, and due to interference from other contractors was not completed until December 27, 1939. The cost of this work was $961.66.

Contract No. 218—Covered the installation of 59 services and the laying of the following cast iron pipe:

257 feet of 4-inch in Ottawa Avenue, Delano Avenue north
400 feet of 6-inch in Nahua Avenue, Delano Avenue north
455 feet of 6-inch in Delano Avenue, Ottawa to Foote Avenues

The contract was awarded to Martin Murphy on September 11, 1939, and due to delay in bringing the streets to grade, work was not completed until February 2, 1940. The contract cost was $2,038.54.

Contract No. 219—For the laying of 533 feet of 6-inch cast iron pipe and the installation of 26 services in Gorham Street, San Jose to Cayuga Avenues, was awarded to Martin Murphy on October 30th and was completed November 24, 1939, for a cost of $1,060.64.

Contract No. 221—Providing for improvements to the distribution system on Hunter's Point was awarded to Pacific States Construction Co. on September 25, 1939. A 30,000 gallon redwood tank was installed at Innes Avenue and Boalt Street with a 2½-inch automatic pump in Boalt Street at Hudson Avenue. The contract also included the laying of 417 feet of 4-inch cast iron pipe and 2,896 feet of 8-inch cast iron pipe in Alvord Street, Fairfax Avenue, Boalt Street and Hudson Avenue. Work was completed November 27, 1939, at a cost of $9,354.82.

Contract No. 223—Covered the installation of 4,030 feet of 6-inch and 1,142 feet of 8-inch cast iron pipe for the Federal Housing Project at Potrero Heights. This contract was awarded to W. J. Tobin on January 30, 1940, and was completed at a cost of $8,180.66 on May 17, 1940.

Contract No. 224—Covered the laying of 672 feet of 6-inch cast iron pipe in 39th Avenue, Lawton to Moraga, and 302 feet of 8-inch cast iron pipe in Moraga Street, 39th to 40th Avenues, together with the installation of 55 services. The contract was awarded to E. J. Treacy on October 30, 1939, and was completed November 14, 1939, for a cost of $2,409.86.

Contract No. 225—Provided for the laying of 317 feet of 6-inch cast iron pipe in Silliman Avenue, Goettingen to Brussels, and 403 feet of 8-inch cast iron pipe in San Jose Avenue, from Niagara north. The contract was awarded to E. J. Treacy on October 10th and was completed December 6, 1939, at a cost of $2,021.56.

Contract No. 226—Covered the laying of 476 feet of 6-inch cast iron pipe and the installation of 4 services in Campbell Avenue, Brussels to San Bruno. The contract was awarded to Martin Murphy on October 30th and work was completed December 1, 1939, for a cost of $1,262.89.

Contract No. 227—Provided for the laying of 673 feet of 6-inch cast iron pipe and the installation of 40 services in 38th Avenue, Lawton to Moraga Streets. Also included was the laying of 68 feet of 8-inch cast iron pipe in Moraga Street at 38th Avenue. This contract was awarded to E. J. Treacy on October 16th and was completed November 3, 1939, at a cost of $1,590.44.

Contract No. 228—Covered the installation of 78 services and the laying of the following cast iron pipe:

1,084 feet of 6-inch in Seal Rock Drive, Clement Street to El Camino Del Mar
200 feet of 6-inch in Alta Mar, Point Lobos Avenue to Seal Rock Drive
245 feet of 8-inch in El Camino Del Mar, Point Lobos Avenue to Seal Rock Drive

This contract was awarded to the San Francisco Water Department on November 27th and work was completed December 22, 1939, for a cost of $3,338.96.

Contract No. 229—Provided for the laying of two parallel 6-inch mains in 19th Avenue from Pacheco to Taraval Streets in connection with the widening of 19th Avenue. The mains were laid inside the curb, one on each side of the street and replaced a former single 6-inch main in the center of the street. A total of 5,436 feet of 6-inch cast iron pipe was installed at a cost of $7,791.57. The contract was awarded to E. J. Treacy on November 13, 1939, and work was completed March 22, 1940.

Contract No. 230—Provided for the continuation of the two parallel 6-inch mains in 19th Avenue from Pacheco Street to Lawton Street, replacing the former single 4-inch main. A total of 5,350 feet of 6-inch cast iron pipe was installed at a cost of $7,607.95. The contract was awarded to E. J. Treacy on November 13, 1939, and work was completed January 15, 1940.

Contract No. 232—Covered the installation of 64 services and the laying of 1,105 feet of 6-inch and 1,398 feet of 8-inch cast iron pipe in the Glen View Garden subdivision. This contract was awarded to E. J. Treacy on December 18, 1939, and was completed April 30th, 1940, for a cost of $5,105.50.

Contract No. 233—Covered the installation of 935 feet of 6-inch cast iron pipe and 64 services in 35th Avenue, Wawona Street to Sloat Boulevard. The contract was awarded to W. J. Tobin on January 2nd and was completed March 11, 1940, for a cost of $1,937.16.

Contract No. 235—For the laying of 772 feet of 8-inch cast iron pipe and the installation of 18 services in 36th Avenue and in Quintara Street was awarded to Martin Murphy on February 19th and completed April 1, 1940, at a cost of $1,748.95.

Contract No. 236—For the laying of 1,760 feet of 6-inch cast iron pipe at various locations in the Forest Hill area was awarded to E. J. Treacy on February 13, 1940. Work was completed March 18, 1940, at a cost of $3,528.09.

Contract No. 237—Covered the installation of 92 services and the laying of the following cast iron pipe:

650 feet of 6-inch in 31st Avenue, Moraga to Noriega Streets
749 feet of 6-inch in 30th Avenue, Ortega to Pacheco Streets
306 feet of 8-inch in Pacheco Street, 29th to 30th Avenues

This contract was awarded to Martin Murphy on February 19th and completed April 5, 1940, for a cost of $3,255.90.

Contract No. 238—Provided for the installation of 17 services and the laying of 624 feet of 6-inch cast iron pipe in 39th Avenue, Taraval to Ulloa, and 230 feet of 8-inch cast iron pipe in Ulloa Street from 39th Avenue west. The contract was awarded to W. J. Tobin on February 19th and completed March 6, 1940. The cost was $1,937.47.

Contract No. 239—For the installation of 33 services and the laying of 648 feet of 6-inch cast iron pipe in 42nd Avenue, Kirkham to Lawton Streets, was awarded to Martin Murphy on March 4, 1940. Work was completed April 1, 1940, at a cost of $1,148.88.

Contract No. 240—For the laying of 734 feet of 8-inch cast iron pipe in the Embarcadero, between piers 50 and 54, was awarded to the San Francisco Water Department on March 11th and was completed on April 5, 1940. The cost was $1,613.33.

Contract No. 241—Provided for the installation of 22 services and the laying of 539 feet of 6-inch cast iron pipe in Ledyard Street, south from Silver Avenue. The contract was awarded to W. J. Tobin on April 15, 1940, and was completed at a cost of $1,045.62 on April 26, 1940.

Contract No. 242—Provides for the laying of 820 feet of 4-inch and 320 feet of 8-inch cast iron pipe and the installation of 80 services in Gaviota Way, Bella Vista Way and El Sereno Court in Miraloma Park. This contract was awarded to W. J. Tobin on April 22, 1940, for a bid price of $2,148.45. Work was temporarily suspended due to interference from the grading contractors and as of June 30, 1940, was only 29 per cent complete.

Contract No. 243—Covered the installation of 85 services and the following cast iron pipe:

456 feet of 6-inch in Edward Street, Arguello to Willard
670 feet of 6-inch in 35th Avenue, Noriega to Ortega
980 feet of 6-inch in 46th Avenue, between Ulloa and Wawona
24 feet of 8-inch in Vicente Street at 46th Avenue

This contract was awarded to W. J. Tobin on April 22nd and was completed June 10, 1940, for a cost of $3,891.73.

Contract No. 244—Covered the installation of 95 services and the following cast iron pipe:

682 feet of 6-inch in 22nd Avenue, Pacheco to Ortega
743 feet of 6-inch in 23rd Avenue, Pacheco to Ortega
356 feet of 8-inch in Pacheco Street, 22nd to 23rd Avenues

This contract was awarded to Martin Murphy on April 29th and completed June 4, 1940, at a cost of $3,250.86.

Contract No. 245—Provided for the installation of 64 services and the following cast iron pipe:

156 feet of 4-inch in 19th Avenue, Ocean Avenue south
24 feet of 6-inch in Ocean Avenue, 19th Avenue east
660 feet of 6-inch in 45th Avenue, Quintara to Rivera
70 feet of 6-inch in Quintara at 45th Avenue
278 feet of 6-inch in 42nd Avenue, Moraga south
120 feet of 8-inch in Moraga Street, 42nd Avenue south
368 feet of 8-inch in Alemany Boulevard, Santa Rosa south

The contract was awarded to Martin Murphy on April 29th and work was completed June 19, 1940. The cost was $4,198.90.

Contract No. 246—Provides for the laying of 800 feet of 8-inch cast iron pipe and the installation of 24 services in 37th Avenue, Vicente to Wawona Streets. This contract was awarded to the San Francisco Water Department on June 3, 1940, for a bid price of $1,750.25. No work had been done as of June 30, 1940.

Contract No. 247—Provides for the installation of 49 services and the laying of 435 feet of 4-inch cast iron pipe in Topeka and Santa Fe Avenues and 570 feet of 6-inch cast iron pipe in Quint Street. This contract was awarded to the San Francisco Water Department for a bid price of $1,895.30 on June 17th and as of June 30, 1940, work had not been started.

Contract No. 248—Provides for the laying of 2,300 feet of 6-inch, 510 feet of 8-inch, and 3,150 feet of 16-inch cast iron pipe in the Merced Manor and Lakeshore Highlands subdivisions. Also included is the installation of 97 services. This contract was awarded to E. J. Tobin on June 10th for a bid price of $20,800.70 and work had not been started as of June 30, 1940.

Contract No. 249—Provides for the laying of 3,750 feet of 6-inch, 7,500 feet of 8-inch, and 1,260 feet of 12-inch cast iron pipe and the installation of 298 services in Lakeside subdivision No. 3. This contract was awarded to E. J. Treacy for a bid price of $24,115.47 on June 10, 1940. No work had been started as of June 30th.

Contract No. 251—Providing for the laying of 500 feet of 6-inch and 1,700 feet of 8-inch cast iron pipe and the installation of 55 services in the south portion of

Lakeside subdivision No. 2, was awarded to E. J. Treacy on June 24, 1940, for a bid price of $4,521.40. As of June 30th, work had not been started.

Contract No. 252—Providing for the installation of 3 services and the laying of 760 feet of 6-inch cast iron pipe in Bayshore Boulevard was awarded to Fred T. Fairey for a bid price of $1,719.20 on June 17, 1940. Work had not been started as of June 30, 1940.

2. *Additions to Supply and Transmission Facilities:*

Contract No. 192—Covered the reconstruction of the lower end of the Calaveras Dam spillway and other incidental work. This contract was awarded to Eaton and Smith on March 13, 1939, and completed February 23, 1940, for a contract cost of $215,411.81.

The major items of the spillway reconstruction were 20,815 c. y. of excavation, 2,930 c. y. of backfill concrete, 8,982 c. y. of structure concrete, 758,232 pounds of reinforcing steel, 21,556 pounds of metal work and 1,098 feet of 6-inch and 8-inch drain tile.

The creek channel was improved for a distance of some 700 feet below the spillway. This involved 10,278 c. y. of excavation and 1,352 sq. yds. of riprap placed on the east bank of channel. Concrete blocks removed from the old stilling pool were used for the riprap.

The two parallel 44-inch steel pipes carrying water from the aerator were removed for a distance of 500 feet along the creek channel and were relocated in a less exposed position farther up the bank. This work involved 1,857 c. y. of excavation and the removing and relaying of 1,031 feet of 44-inch steel pipe.

Considerable grouting across the lip of the spillway and the hillside forming the west abutment of the dam was also done under this contract, in an effort to stop the seepage that occurs with a reservoir storage above elevation 726. A total of 4,171 feet of grout holes were drilled and 12,604 sacks of cement were used.

Contract No. 208—For the tiling of the interior of the Pulgas Temple substructure was awarded to the American Art Tile Company on October 9, 1939, and completed December 4, 1939, for a lump sum bid price of $3,475.00. Approximately 3,000 square feet of blue-green colored, glazed tile was placed to cover the interior of the substructure, including the weir and visible portions of the tunnel, thus further enhancing the beauty of this structure which is open to public inspection.

Contract No. 216—Providing for slide area excavation and relocation of Crystal Springs pipe line No. 1 at Sierra Point, together with cross-connections near Sierra Point and Pulgas pumps, was awarded to Paris Bros. on October 23, 1939. Work was completed April 8, 1940, for a contract cost of $31,342.30.

The 44-inch Crystal Springs pipe line No. 1 was re-located at Sierra Point in 1929 by the Spring Valley Company to keep it clear of the new Bayshore Highway. Excavation for the highway at that time caused a slide to move at a point where the pipe was laid on a wooden trestle. In 1929 the trestle was replaced by a suspension bridge which was used to support about 175 feet of 36-inch pipe across this slide area. This bridge was a constant source of worry and during recent winters, the supporting piers had shown a tendency to move downhill with the slide. Under Contract No. 216, this suspension bridge was removed and the pipe was relocated in a wide bench cut into the hillside in undisturbed ground above the slide. A total of 30,589 cubic yards of dirt were moved to construct the bench and slope the hillside above to safe limits. An additional 757 cubic yards were excavated for the pipe trench. In relaying the pipe, 140 feet of the old 44-inch pipe and 430 feet of new pipe furnished by the contractor were used. Cross-connections of 24-inch pipe were installed between the No. 1 and No. 2 Crystal Springs pipe lines both south of Sierra Point and north of Sierra Point at Brisbane, thus permitting this short piece of line to be isolated in case of further trouble.

Also included in this contract was the installation of a 30-inch gate with 44-inch tapers to make a cross-connection between the No. 1 and No. 2 Bay crossing pipe lines at a point approximately 100 feet west of Pulgas pumps.

Contract No. 234—Provides for installing about 700 feet of 30-inch steel pipe cross-connecting between the Crystal Springs pipe line No. 2 and the Baden-Merced pipe line at Baden. The contract was awarded to Paris Bros. on June 17, 1940, for a bid price of $18,556.50. Work had not been started at June 30th.

3. *Miscellaneous Contracts:*

Contract No. 210—Covered the repaving of street and sidewalk openings made by the department for installation or repair work during the fiscal year 1939-40. The contract was awarded to the Pacific Pavements Co., Ltd. on June 26, 1939, and terminated June 30, 1940. Payments under this contract totaled $26,676.32. Repaving over trenches opened by other contractors performing work for the department is not included under this annual contract as each contractor must in such cases provide for or perform his own repaving.

Contract No. 220—Covered replastering, water-proofing, roofing and painting for the penthouse on the Water Department building at 425 Mason Street. This contract was awarded to Adam Arras & Son on September 25th and was completed November 18, 1939, for a contract price of $1,080.00.

B—Informal Contracts:

The following three jobs, involving less than $1,000.00 each, were performed under work orders issued after posting a notice of invitation for bids and the receipt of at least three informal bids for each job:

Informal Bid No. 57—Covered the tearing down and removal of the old Black Point pump station building at the foot of Van Ness Avenue. All structures were removed with the exception of the brick chimney which will remain and be maintained as a permanent marker of this historic site where a pump station was first installed in 1858 to pump water brought by flume from Lobos Creek up into the Lombard Street reservoir. Symon Bros. were low bidders and performed the work for $142.00.

Informal Bid No. 58—Provided for the laying of 596 feet of 6-inch cast iron pipe in Innes Avenue, Hawes to Ingalls Streets. The San Francisco Water Department was the lowest of five bidders and performed the work for $887.81.

Informal Bid No. 59—Covered the installation of a cathodic corrosion eliminator on the Bay Crossing pipe line No. 1 near Newark. The Enterprise Electric Works submitted the lowest of six bids received and performed the work for $220.00. The corrosion eliminator was installed as an experiment in protecting the pipe from the severe external corrosion to which it is exposed at this location.

AGRICULTURAL DIVISION

On July 1, 1940, the land owned in fee was 63,868.883 acres, a decrease of 5.27 acres from the acreages shown in the last annual report. said decrease representing the area of a portion of the 200-foot strip of Pleasanton Wells Land, Alameda County, which was sold to Robert H. Dana and wife on May 22, 1939.

Of the above total acreage, about 34,299 acres are under lease covered by 168 leases. The leased area is less than last year by 32.99 acres, accounted for by the following changes:

Decreases:	M. V. Nunes, lease not renewed	30 acres
	C. Ginestra, lease not renewed	2.5 "
	Massolo Bros., reduction in area	2.79 "
		35.29 acres
Increase:	A. Greppi, new lease	2.30 "
	Total Net Decrease	32.99 acres

SUMMARY

	Total Acreage	Leased Acreage	No. of Tenants	Cash Rentals	Share Crop Rentals
Alameda and Santa Clara Co's:					
Sunol District	37,158.920	32,760.730	45	$22,680.63	$4,548.99
Pleasanton District	862.074	697.950	12	1,035.65	375.17
Niles District	741.724	308.047	51	1,810.61	
Hetch Hetchy R/W	121.246	10.000	1	120.00	
	38,883.964	33,776.727	109	$25,646.89	$4,924.16
San Mateo County:					
Watershed	22,768.516	300.703	5	$9,087.60	
Outside Watershed	1,069.723	166.105	32	4,196.45	43.63
Hetch Hetchy R/W	198.311	29.360	2	610.00	
	23,036.550	496.168	39	$13.894.05	$43.63
San Francisco County	948.369	31.660	20	5,312.00	
Grand Totals	63,868.883	34,304.555	168	$44,852.94	$4,967.79

Pleasanton Lands:

The lease to the Grand Junction Sugar Company on 485 acres near Pleasanton was not renewed. After having been consecutively planted to sugar beets for three years, a system of crop-rotation planting was considered advisable in order to restore fertility of the soil. Therefore, a lease on a share-crop basis was entered into under which the City could direct and control such a program. An adjoining tract of 40 acres, which had been planted to alfalfa for some years, was added to the original lease making the new one 525 acres in extent.

Planting of crops on this lease was delayed until late in the Spring on account of wet ground conditions caused by a high water table following an above-normal seasonal rainfall. Sixty acres prepared for alfalfa could not be planted at all as it dried out too late in the spring for seeding, and about 40 acres in the lowest areas were still unworkable on June 30th. The possibility of draining this land is now under consideration.

The approximate acreage of crops planted on this leasehold is as follows:

Sugar beets	110 acres
Tomatoes	115 "
Wheat	100 "
Barley	100 "
	425 acres

The change from cash rent to a share crop basis on this lease accounts for the decrease shown in rents received from the Pleasanton District. This, however, will be made up for the most part when the share crops are sold this fall, the returns from which will appear in the receipts for the ensuing fiscal year.

Cattle Leases:

The leases covering land used for grazing purposes provide for a sliding scale of rent based on the selling price of cattle at the Union Stock Yards, South San Francisco, during the latter part of August of each year. The cattle price in August, 1939, was slightly lower than the base price named in the leases, but the renewal of two cattle leases at higher annual rentals resulted in a net increase of $215.00 from this source.

Unpaid Rentals:

Unpaid rentals as of June 30, 1940, were as follows:

Agricultural	$3,195.86
Non-agricultural	1,121.46

Of the unpaid agricultural rentals, the sum of $1,336.00 is due from the estate of T. V. Perry, mentioned in the last annual report and which is now nearing a settlement. Of the balance, payment of $1,669.00 is anticipated from three lessees of grazing land in the early Fall when the cattle are sold. Non-agricultural rentals in arrears are made up principally of two items: $562.00 from the Crystal Springs Public Golf Course, Inc., and $296.00 from Thos. Cusick, lessee of the boating privilege on Lake Merced. The balance consists of smaller items. None of these are considered doubtful and payment may be expected in due course.

Share Crops:

During 1939-40 there were 13 leases on a share crop basis and the City's share from these was sold for $9,967.79. The season of 1938-39 was not favorable for good crops due to light rainfall, but prices were fair and the amount received from this source was slightly more than last year. All of the hay and grain was sold before June 30, 1940, except one lot of 52 sacks of oats which was stored in the Hall warehouse at Pleasanton.

The Spring of 1940 was very wet and there is a big crop of hay in prospect, the quality of which may not be good as it already is showing rank growth and will be coarse in texture. On account of the heavy crop of hay and grain throughout the State, the outlook for favorable prices is not encouraging.

Walnut Orchard:

The crop of walnuts harvested in the fall of 1939 was 153,770 pounds, having a gross valuation of $12,747.35. This was the lightest crop since 1934. The nuts were the smallest in size and graded lowest in quality of any crop harvested in the history of the orchard. The season was unfavorable for walnuts throughout the State in general, but in the case of the City's orchard the absence of moisture in the soil, as shown by borings, undoubtedly was responsible for a weakened condition of the trees. There was a large amount of die-back this spring, similar to that which occurred in 1930 and 1934. The cause of this blight is somewhat obscure, but it is believed that this die-back, damage to trees and nuts from excessively hot spells, occurrence of short crops and poor quality nuts would all be minimized if a permanent irrigation system was installed by which an adequate supply of moisture could be maintained at all times. An attempt was made during the late fall, after harvest, to irrigate the orchard by means of galvanized iron surface pipe and ditches but this method was found to be slow, ineffective and expensive. Investigations for the installation of a permanent concrete pipe irrigation system are being made.

From present indications, the crop to be harvested this fall will be low in yield but will consist of large nuts of good quality. The shortness of this crop may also be attributed to lack of moisture during the unfavorable season of 1938-39, as it is during that period the fruit spurs, and buds should have developed to produce the 1940 crop.

Care of the Orchard:

A considerable amount of work was done on the trees during the year, which consisted of cutting out branches killed from die-back, cleaning out old wounds and sealing them with waterproof compound, treating what little crown-gall there was by cutting out affected parts and painting with Bordeaux Mixture, removing some of the old wire bracing where it was no longer needed as support for limbs. A few trees were removed from a portion of the Mayette planting where the crowding of trees is becoming a serious problem.

The usual pest control program was followed except that no Bordeaux was applied in the spring. Oil emulsion was applied in the late winter and nico dust was used for controlling aphis.

A change was made in the cultural operations as heretofore followed, and the orchard was given two good chiselings in place of two discings. This was done for the purpose of loosening up the top-soil, and to assist along these lines some kind of cover-crop will be planted this fall.

Fencing and Boundary Lines:

No additional surveys of boundary lines were made during the year. A new fence was built on the boundary line separating the City's three-quarters of Section 10/R. 6 S./2 E., Santa Clara County, and the adjoining property to the west. This fence was built under an arrangement whereby the City furnished the material and the owner of the other property furnished the labor and other expense necessary for the job. The length of fence so built was about one and one-half miles. Fencing material was also furnished to a number of tenants for use in repairing boundary fences on their leases where such leases adjoined property owned by other parties.

Care of Properties:

The work of controlling noxious weeds was continued as heretofore. Star thistle was hoed early enough to prevent reseeding. Drainage ditches in the vicinity of Pleasanton were cleaned of weeds, and the excellent squirrel-control work done in the past was continued with the helpful cooperation of the Agricultural Commissioners of Alameda and Santa Clara Counties.

CROP AND VALUE DURING CITY OWNERSHIP

Year	Total Yield Pounds	Gross Value	Net Cash Paid by Association	Association Charges in % of Gross	Packing House Charges per Pound
1930	110,361	$23,905.44	$20,024.55	12.06	.0138
1931	91,570	13,778.73	12,272.73	10.90	.0091
1932	206,795	28,994.25	20,391.18	29.80	.007
1933	153,080	23,635.21	17,905.45	24.40*	.0073
1934	136,672	18,039.52	13,236.00	26.60*	.0059
1935	209,095	27,359.11	22,719.87	17.80*	.0045
1936	187,605	27,865.13	24,947.57	11.73*	.0046
1937	179,954	23,808.71	21,102.05	11.36*	.0042
1938	258,934	36,812.05	31,801.16	15.76	.0090
1939	108,540	11,090.64	8,077.15†	18.10	.0124

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*Includes percentages of crops delivered to Control Board and loss in sales of same.
†Estimated.

ACCOUNTING AND AUDITING

The accounts of the San Francisco Water Department are maintained strictly in accordance with the requirements of the State Railroad Commission and Section 64 of the Charter, which provides for supervision and control by the Controller and the accounts of the Department have been so coordinated with the Controller's system that no encumbrance against the Budget estimates can be incurred without prior certification from the Controller that funds are available.

COMMENTS ON FINANCIAL STATEMENTS
GENERAL BALANCE SHEET

EXHIBIT A

ASSETS AND LIABILITIES

Following the practice adopted in Report of 1938-39 the General Balance Sheet submitted herewith has been set up in a form which deviates from usual accounting practices but defines more clearly the captions commonly in use (Exhibit A). The following notes give additional detail for certain items on the Balance Sheet, when such addition of detail or explanation may seem desirable.

Properties—$50,006,393.29

Complete detail for this account is shown on Schedule No. 1. The net additions for the fiscal year are now shown which in turn are supported by Schedule No. 16. (Additions, Betterments and Replacements.)

Cash—$2,928,468.87

The separate funds in which this amount is held is shown on Schedule No. 3.

Accounts Receivable—$733,100.85

Inter-Fund Accounts Receivable—$43,124.69

Deferred Charges—$373,767.48

These accounts are clearly defined on Balance Sheet.

Surplus—$13,055,135.06

An analysis of the disposition of Earned Surplus, together with additions thereto and deductions therefrom is shown in body of these comments and also on Schedules C and D.

INCOME STATEMENT

EXHIBIT B

Gross Water Sales for the year were $7,286,064.00. Deductions of Cash Refunds $995.53 and allowances and adjustment made to various consumers in amount of $16.209.54 leaves net sale of $7,268,858.93, or an increase of $245,318.74 over the fiscal year 1938-39. The above figures do not include water deliveries to Golden Gate International Exposition in amount of $40,609.69. These deliveries will be offset by the acquisition of pipe lines built and paid for by the Exposition Company.

Operating Expenses show an increase of $9,060.09. This is, however, not representative of the fluctuation between various classes of expenditures in the year 1938-39. Extraordinary repairs to Calaveras Spillway and Submarine Pipe Line at Newark Slough amounted to $74,797.29. Increase of $105,382.48 in "Provision for Depreciation" more than offset that. Municipal Taxes—Comparison increased $24,141.79. This figure is determined by the amount of water used by other city departments. Other Operating Expenses decreased $45,666.89.

Following is statement summarizing the above:

	Increase	Decrease
Source of Supply	....	$10,894.41
Pumping	....	25,655.23
Purification	$3,246.28	....
Transmission and Distribution	13,961.86	....
Commercial Division	6,653.53	....
Administrative and General	....	85,791.86
Taxes — Actual	....	21,984.35
Provision for Depreciation	105,382.48	....
Municipal Taxes—Comparison	24,141.79	....
Net Increase	....	9,060.09
	$153,385.94	$153,385.94

DISPOSITION OF EARNED SURPLUS

Exhibits C and D show surplus for past twelve months and composition of surplus accumulated to date. Following is a statement of the disposition of surplus arising from operations, together with additions and deductions not strictly confined to operations.

Surplus:	To June 30, 1939	Year 1939-1940	To June 30, 1940
Contributed—			
To General Fund	$8,830,266.10	$902,898.00	$9,733,164.10
To Hetch Hetchy Water Supply	2,204,252.10	681,706.64	2,885,958.74
To Hetch Hetchy Power	4,170.00	....	4,170.00
Advanced by General Fund	*84,298.00*	....	*84,298.00*

DISPOSITION OF EARNED SURPLUS—Continued

Surplus:	To June 30, 1939	Year 1939-1940	To June 30, 1940
Appropriated—			
For Bond Redemption	$9,000,000.00	$1,000,000.00	$10,000,000.00
1933 Water Distribution	1,405,594.33	563,000.00	1,968,594.33
Additions and Betterments	4,839,816.79	330,400.00	5,170,216.79
Purchase of Land	22,858.50	....	22,858.50
For Bond Interest—1933 Water Distribution Bonds	1,324.00	....	1,324.00
For Other Purposes	29,460.38	....	29,460.38
To Surplus	*433,378.51*	*53,770.07*	*487,148.58*
	$25,820,065.69	$3,424,234.57	$29,244,300.26
Add:			
Initial Surplus—Excess Earnings, Spring Valley Water Co.	$4,152,652.24	....	$4,152,652.24
Valuation—Municipal Water Works	100,000.00	....	100,000.00
Grants Earned on Federal Projects	2,358,987.60	....	2,358,987.60
Salvage, Newark - San Lorenzo Pipe Line	323,723.34	....	323,723.34
Salvage, Corral Hollow Pipe Line	86,366.74	....	86,366.74
Land Sales	24,288.64	2,637.50	26,926.14
Bond Premium	821,684.38	....	821,684.38
Reservoir Sites and Aqueducts	20,091.00	....	20,091.00
Airport Pipe Line Transferred	20,898.83	....	20,898.83
City of Palo Alto	....	45,000.00	45,000.00
U. S. Army, Moffett Field	14,000.00	....	14,000.00
California Water Service Co.	28,000.00	28,000.00	56,000.00
Miscellaneous Additions	122,157.88	11,025.25	133,183.13
	$8,072,850.65	$86,662.75	$8,159,513.40
Deduct:			
Contribution to General Fund—Net	$8,745,968.10	$902,898.00	$9,648,866.10
Deficit County Line Water Works	19,189.15	....	19,189.15
Payment to Spring Valley for purpose of enabling City to take over Properties in advance	745,274.31	....	745,274.31
Lands Contributed to City	143,121.07	....	143,121.07
Contribution to Other Utilities	2,208,422.10	681,709.64	2,890,131.74
Miscellaneous Deductions from Surplus	13,914.58	7,000.12	20,914.70
Depreciation Due to Revaluation	8,481,814.33	....	8,481,814.33
Depreciation—NOT Funded	1,574,226.48	825,140.72	2,399,367.20
	$21,931,930.12	$2,416,748.48	$24,348,678.60
Surplus	$11,960,986.22	$1,094,148.84	$13,055,135.06

Note: Net Income shown on Income Statement has been increased for the purpose of this report $825,140.72 from $2,599,093.85 to $3,424,234.57, which represents current year's depreciation not funded.

Italic figures denote loss and deficiency.

SAN FRANCISCO WATER DEPARTMENT

EXHIBIT A

BALANCE SHEET—JUNE 30, 1940

ASSETS

PROPERTIES:

This is the original cost of construction of properties purchased from Spring Valley Water Company in 1930 and additions made since by the Water Department. Of the total $71,096,466.84 is for completed projects and $79,494.45 for work not yet completed $71,175,961.29

Estimated Loss in Service Value due to wear and tear 21,169,568.00

Remaining Service Value of the Properties now in use $50,006,393.29

CASH:

We have cash deposited with the Treasurer of the City and County of San Francisco totaling $2,898,468.87. Of this $1,812,301.68 is for retirement of bonds maturing July 1, 1940, and for payment of Bond Interest. $343,425.31 for Additions and Betterments, $167,233.76 for Replacement of worn out Plant and Equipment; $126,835.84 held in trust to guarantee the payment of water bills and other work done for the public; $448,672.28 for payment of operating expense and $30,000.00 for General Manager's Revolving Fund 2,928,468.87

ACCOUNTS RECEIVABLE:

Water consumers' bills due the Department amount to $645,371.46; City of Palo Alto $167,304.52 and other Creditors the sum of $7,424.87. Against this amount is set up a reserve of $87,000.00 to offset any uncollectible accounts, leaving a net figure of 733,100.85

INTER-FUND ACCOUNTS RECEIVABLE:

This amount is due the Water Department from other City Departments for work performed, but for which the Water Department has not been paid 43,124.69

DEFERRED CHARGES:

Of the total of $373,767.48, the sum of $279,621.79 is the amount expended for Materials and Supplies, in stock not yet used; $5,734.28 for cash or credit advanced for work in progress; and $88,411.41 for uncompleted Contracts and Other Commitments 373,767.48

$54,084,855.18

LIABILITIES

BONDED DEBT:

This is the remaining balance due on amount borrowed by the Water Department in Bonds, which are being repaid at the rate of $1,563,000 per year $38,880,000.00

BOND INTEREST PAYABLE:

Accrued, not due:

$697,500.00 represents six months' interest on one lot of bonds maturing July 1 and January 1 of each year and $26,253.33 is one month's interest on lot of bonds maturing June 1 and December 1 of each year 723,753.33

Matured Coupons Unpaid:

This is money due Bond Holders for interest coupons not yet presented for payment 104,862.50

ACCOUNTS PAYABLE:

This is money the Water Department owes on uncompleted contracts, for materials and for services contracted but unpaid. This also includes Advances and Deposits made by Consumers 329,240.93

INTER-FUND ACCOUNTS:

This is the unpaid portion of Annual Contributions to City and County General Fund—$402,898.00 and $33,091.80 due to other City departments 435,989.80

DEFERRED CREDITS:

Of this total of $555,873.56, $366,380.41 is the amount expended by the Golden Gate International Exposition for pipe lines and reservoirs to Treasure Island, which entitles it to delivery of water of an equal value; $167,304.52 is the unamortized principal and interest of Palo Alto Pipe Line which will be taken into income when due; $22,188.63 reserve for accident insurance and other items 555,873.56

SURPLUS:

This is the equity of the People of San Francisco in the San Francisco Water Department's system. It represents the amount that the present value of the properties exceed the outstanding obligations 13,055,135.06

$54,084,855.18

SAN FRANCISCO WATER DEPARTMENT

EXHIBIT B

INCOME ACCOUNT

FOR TWELVE MONTHS ENDED JUNE 30, 1940 AND 1939

	Twelve Months Ended June 30		Increase or *Decrease*	Cumulative from March 3, 1930 to June 30, 1940
	1940	1939		
Sale of Water:				
San Francisco	$6,230,506.36	$6,042,870.00	$187,636.36	$62,421,010.79
Outside of San Francisco	469,360.67	436,144.56	33,216.11	3,422,057.63
Municipal Departments—Actual	68,498.21	68,173.73	324.48	703,050.49
Municipal Departments—Comparison*	500,493.69	476,351.90	24,141.79	3,717,780.35
	$7,268,858.93	$7,023,540.19	$245,318.74	$70,263,899.26
Operating Expense:				
Source of Water Supply	$183,213.68	$194,108.09	*$10,894.41*	$2,922,645.79
Pumping	155,247.36	180,902.59	*25,655.23*	2,897,932.94
Purification	67,594.27	64,347.99	3,246.28	470,312.59
Transmission and Distribution	320,718.12	306,756.26	13,961.86	2,962,488.47
Commercial Division	355,751.52	349,097.99	6,653.53	3,471,418.22
Administrative and General	277,273.68	363,065.54	*85,791.86*	2,634,240.47
Taxes—Actual	235,503.86	257,488.21	*21,984.35*	2,648,641.56
Provision for Doubtful Accounts	6,000.00	6,000.00	....	188,137.07
Provision for Depreciation	925,190.72	819,808.24	105,382.48	11,546,156.58
Municipal Taxes—Comparison*	500,493.69	476,351.90	24,141.79	3,734,019.07
	$3,026,986.90	$3,017,926.81	$9,060.09	$33,475,992.76
Profit from Operations	$4,241,872.03	$4,005,613.38	$236,258.65	$36,787,906.50
Other Income:				
Rentals, including Crop Shares	$49,136.29	$50,865.36	*$1,729.07*	$543,173.00
Interest Earned	15,020.68	15,000.06	20.62	287,616.78
Sale of Walnuts	13,730.46	33,909.74	*20,179.28*	234,369.71
Miscellaneous	24,043.00	21,913.29	2,129.71	91,470.80
	$101,930.43	$121,688.45	*$19,758.02*	$1,156,630.29
Other Expense:				
Bond Interest	$1,719,423.33	$1,786,943.34	*$67,520.01*	$19,207,184.70
Agricultural Division	9,571.94	11,188.32	*1,616.38*	171,149.10
Walnut Orchard Expense	15,024.33	19,439.57	*4,415.24*	161,540.42
Miscellaneous	689.01	15,403.01	*14,714.00*	31,743.66
	$1,744,708.61	$1,832,974.24	*$88,265.63*	$19,571,617.88
Net Income	$2,599,093.85	$2,294,327.59	$304,766.26	$18,372,918.91
Comparison Charges for Federal Income and State Corporation Franchise Taxes Amount to (Estimated)	$447,122.26	$397,864.08	$49,258.18	

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*Water Service to Municipal Departments Offset by Municipal Taxes.

Italic figures denote loss and deficiency.

EXHIBIT C

SURPLUS ACCOUNT

For Twelve Months Ended June 30, 1940

Surplus—June 30, 1939		$11,960,986.22	
Add:			
Net Income for Twelve Months Ended June 30, 1940		2,599,093.85	
Cash Received Under Agreements a/c Palo Alto Pipe Line		73,000.00	
California Water Service Co.	$28,000.00		
City of Palo Alto	45,000.00		
Miscellaneous		13,662.75	$14,646,742.82
Deduct:			
Contribution to General Fund 1939-1940		$902,898.00	
Contribution to Hetch Hetchy Water Supply 1939-1940		681,709.64	
Miscellaneous		7,000.12	1,591,607.76
Surplus—June 30, 1940			$13,055,135.06

EXHIBIT D

COMPOSITION OF SURPLUS—CONDENSED

June 30, 1940

Initial Surplus—March 3, 1930:			
Amortization Contribution (Spring Valley)	$4,152,652.24		
Valuation of Municipal Water Works	100,000.00		
	$4,252,652.24		
Less Additional Allowance for Depreciation—March 1, 1920, to March 3, 1930	2,327,916.67	$1,924,735.57	
Additions:			
Net Profit—March 3, 1930, to June 30, 1940	$18,372,918.91		
Miscellaneous and Year to Year Adjustments	3,694,054.26	22,066,973.17	
Grants Earned on Federal Public Works Projects—Docket 1510	$2,245,000.00		
Grants Earned on Federal Public Works Projects—Docket 1132	113,987.60	2,358,987.60	
Bond Premiums, Less Bond Expense—1933 Water Distribution Bonds		808,292.40	
Salvage Value of Newark-San Lorenzo Pipe Line Transferred from Hetch Hetchy Water Supply		323,723.34	
Salvage Value Portion Corral Hollow Pipe Line		86,566.56	
Federal Government Expenditures for Labor Constructing a Roof Over Crystal Springs Aqueduct		20,091.00	
Depreciated Value of 12-inch Mains Transferred from San Francisco Airport		20,898.83	
Cash Received Under Agreements—Moffett Field and California Water Service Company		115,000.00	$27,725,268.47
Deductions:			
Contributions to General Fund	$9,733,164.10		
Less: Contribution from General Fund a/c P. W. A. Interest and Redemption	84,298.00	$9,648,866.10	
Contributions to Hetch Hetchy Water Supply	$2,885,961.74		
Contributions to Hetch Hetchy Power Division	1,228.59	2,887,190.33	
Lands Contributed:			
To City and County of San Francisco for Streets and Boulevards	$137,811.07		
To Joint Highway Commission for Streets and Boulevards in San Mateo County	5,310.00	143,121.07	
Excess of Adjusted Book Value of Plant Appraisal—December 31, 1937		1,990,955.91	14.670,133.41
Surplus—June 30, 1940			$13,055,135.06

EXHIBIT E

COMPARATIVE STATEMENT OF OPERATING EXPENSES

For the Fiscal Years Ended June 30, 1939, and June 30, 1940

	Fiscal Year Ended June 30	
Source of Water Supply Expenses:	1939	1940
Superintendence	$20,919.83	$21,262.17
Operating Labor	27,978.12	27,922.18
Operating Supplies and Expenses	18,739.70	15,924.45
Repairs—Buildings and Fixtures	83,438.87	93,066.08
Repairs—Surface Facilities	42,447.84	24,742.02
Repairs—Miscellaneous Equipment	583.73	296.78
	$194,108.09	$183,213.68
Pumping Expenses:		
Pumping Labor	$45,048.96	$40,660.85
Miscellaneous Labor	2,658.34	4,190.78
Fuel for Steam	11,096.62	14,926.77
Power Purchased	107,406.01	79,009.46
Lubricants	61.89	80.70
Miscellaneous Supplies and Expenses	2,235.91	1,566.21
Repairs—Primary Pumping Equipment	5,273.39	7,846.13
Repairs—Boilers and Equipment	290.37	904.20
Repairs—Miscellaneous Equipment	839.98	1,656.23
Repairs—Buildings, Fixtures, and Grounds	5,991.12	4,406.03
	$180,902.59	$155,247.36
Purification Expenses:		
Labor (and Superintendence)	$28,525.25	$25,310.01
Supplies and Expenses	31,089.44	38,536.91
Repairs—Plant and Structures	4,733.30	3,747.35
	$64,347.99	$67,594.27
Transmission and Distribution Expenses:		
Superintendence	$34,618.84	$35,864.26
Patrolling Storage Facilities	12,063.31	13,025.91
Meter and Fittings—Dept. Expenses and Supplies	55,517.14	51,950.91
Street Department—Expenses and Supplies	13,511.11	14,940.41
Consumers' Premises Expenses	13,495.97	12,897.27
Miscellaneous Supplies and Expenses	5,578.19	6,447.38
Repairs—Transmission Mains and Canals	15,368.96	11,008.85
Repairs—Reservoirs, Tanks and Standpipes	11,946.01	11,348.50
Repairs—Distribution Mains and Canals	62,557.68	73,522.31
Repairs—Services	67,809.97	68,691.11
Repairs—Buildings and Structures	12,639.27	19,904.34
Repairs—Miscellaneous Equipment	1,649.81	1,116.87
	$306,756.26	$320,718.12
Commercial Expenses:		
Collections	$113,841.97	$114,973.80
Reading Meters	34,466.32	38,105.87
Bookkeeping Department	106,249.31	106,703.91
General	32,944.42	34,491.24
Inspection and Service	47,193.84	47,148.35
Shipping	14,402.13	14,328.35
	$349,097.99	$355,751.52

EXHIBIT E—Continued

General and Miscellaneous:	Fiscal Year Ended June 30 1939	1940
Salaries of General Officers	$18,399.84	$18,684.27
Salaries of General Office Clerks	41,231.95	45,543.20
Miscellaneous General Office Supplies and Expenses	10,039.18	15,052.38
Injuries and Damages	1,853.59	3,028.85
Relief Department Expenses	37,883.23	38,217.82
Mason Street Building Operation	21,876.60	21,791.78
Telephone Service	15,563.54	15,689.23
Guest Cottages and Rest Rooms	1,521.98	1,858.44
General Engineering	32,556.72	43,252.90
Hydrography	2,809.79	2,399.53
Other Miscellaneous Expenses	766.70	827.54
Compensation Insurance	8,737.60	8,901.19
Other Insurance	5,952.15	4,723.56
Repairs—Mason Street Building	7,195.67	5,471.23
Repairs—Telephone System	5,893.49	4,909.44
Advisory and Consulting Expenses	7,300.00	7,300.00
Public Utilities Expenses	45,209.10	44,622.32
Property Taxes (Outside San Francisco)	257,488.21	235,503.86
	$522,279.34	$517,777.54
Repairs—Extraordinary, Calaveras Spillway and Newark Slough Submarine Pipe Line	$75,257.29	....
Professional Services — Extraordinary, Depreciation Survey	23,017.12	....
	$620,553.75	$517,777.54

SCHEDULE No. 1

FIXED CAPITAL IN SERVICE

		Balance June 30, 1939	Balance June 30, 1940	Net Additions 1939-1940
1010	Intangible Capital	$3,183,224.00	$3,183,224.00	....
1015	Landed Capital	12,380,755.15	12,380,981.72	226.57
1020	Building Structures & Grounds	1,097,314.33	1,097,670.06	355.73
1025	Source of Supply	19,654,453.15	19,922,406.38	267,953.23
1030	Pump Station Equipment	572,385.14	572,946.05	560.91
1035	Purification	139,925.88	142,367.10	2,441.22
1040	Transmission and Distribution Inside of San Francisco	31,757,276.06	31,931,523.01	174,246.95
1041	Transmission and Distribution Outside of San Francisco	380,900.63	380,900.63	....
1045	General Equipment	107,001.06	115,029.85	8,028.79
1046	Automobiles	108,601.64	115,586.88	6,985.24
1050	Undistributed Construction Costs	1,253,831.16	1,253,831.16	....
		$70,635,668.20	$71,096,466.84	$460,798.64
1200	Less Reserve for Depreciation	20,289,571.44	21,169,568.00	
		$50,346,096.76	$49,926,898.84	
1400	Construction Work in Progress		79,494.45	
		$50,346,096.76	$50,006,393.29	

SCHEDULE No. 2

COMPARISON OF ACTUAL REVENUE AND EXPENDITURES WITH BUDGET ESTIMATE FISCAL YEAR 1939-40

		Month of June, 1940			Twelve Months to June 30, 1940		
Description:	Total Budget and Modifications	Budget	Revenue Expenditures Accruals	Increase or *Decrease*	Budget	Revenues Expenditures Accruals	Increase or *Decrease*
City Distribution Division	$351,524.00	$29,277.00	$33,904.18	$4,627.18	$351,524.00	$356,495.26	$4,971.26
Peninsula Division	262,207.00	21,850.00	21,405.67	*444.33*	262,207.00	244,918.65	*17,288.35*
Alameda Division	89,083.00	7,424.00	8,628.03	1,204.03	89,083.00	89,570.55	487.55
Fuel and Power Excess	17,000.00	1,416.00	....	*1,416.00*	17,000.00	....	*17,000.00*
Purification Division—General	21,040.00	1,753.00	2,235.47	482.47	21,040.00	22,578.63	1,538.63
Agricultural Division	30,100.00	2,508.00	2,025.69	*482.31*	30,100.00	24,596.27	*5,503.73*
Commercial Expense	374,895.00	31,241.00	30,956.73	*284.27*	374,895.00	368,596.83	*6,298.17*
General and Miscellaneous	156,051.00	13,004.00	19,362.98	6,358.98	156,051.00	163,423.10	7,372.10
Services of Bureau of Engineering	3,500.00	290.00	*1,750.00*	*2,040.00*	3,500.00	1,709.44	*1,790.56*
Advisory and Consulting Expense	7,300.00	608.00	608.00	....	7,300.00	7,300.00	....
Public Utilities Commission	44,332.00	3,694.00	3,694.00	....	44,332.00	44,332.00	....
Insurance Compensation	7,500.00	625.00	654.06	29.06	7,500.00	4,445.21	*3,054.79*
Insurance—Other	6,895.00	575.00	114.36	*460.64*	6,895.00	4,723.56	*2,171.44*
Injuries and Damages	6,000.00	500.00	1,405.71	905.71	6,000.00	3,028.85	*2,971.15*
Pensions	40,000.00	3,334.00	3,226.01	*107.99*	40,000.00	38,217.82	*1,782.18*
Property Taxes	236,746.00	19,729.00	19,625.00	*104.00*	236,746.00	235,503.86	*1,242.14*
Miscellaneous	19,302.00	1,608.00	1,725.53	117.53	19,302.00	12,264.49	*7,037.51*
Equipment	13,150.00	1,096.00	1,096.00	....	13,150.00	13,150.00	....
Replacement and Reconstruction	100,050.00	8,338.00	8,338.00	....	100,050.00	100,050.00	....
Additions and Betterments	330,400.00	27,533.00	27,533.00	....	330,400.00	330,400.00	....
Bond Interest and Redemption	3,731,325.00	310,943.00	310,943.00	....	3,731,325.00	3,731,325.00	....
Contribution—General Fund	902,898.00	75,246.00	75,246.00	....	902,898.00	902,898.00	....
Contribution—Hetch Hetchy Water Supply	145,128.00	12,094.00	14,550.39	2,456.39	145,128.00	134,010.64	*11,117.36*
	$6,896,426.00	$574,686.00	$585,527.81	$10,841.81	$6,896,426.00	$6,833,538.16	*$62,887.84*
Revenues:							
Sale of Water	$6,631,120.00	$616,694.00	$606,528.66	*$10,165.34*	$6,631,120.00	$6,768,365.24	$137,245.24
Other Income	100,000.00	8,332.00	5,204.14	*3,127.86*	100,000.00	101,930.43	1,930.43
	$6,731,120.00	$625,026.00	$611,732.80	*$13,293.20*	$6,731,120.00	$6,870,295.67	$139,175.67
	$165,306.00						$202,063.51
Sub-Total	*$165,306.00			*$24,135.01*			*165,306.00*
Net Savings over Budget Estimates				*$24,135.01*			$36,757.51

*SUPPLEMENTAL APPROPRIATIONS

Date	Bill No.	Ordinance No.	Amount
Aug. 14, 1939	253	248	$1,000.00
Aug. 14, 1939	262	257	7,500.00
Sept. 11, 1939	293	290	806.00
May 11, 1940	636	598	91,000.00
May 31, 1940	688	646	65,000.00
			$165,306.00

Italic figures denote loss and deficiency.

SCHEDULE No. 3

SAN FRANCISCO WATER DEPARTMENT
CASH AND OUTSTANDING WARRANTS

JUNE 30, 1940

	Treasurer's Balance	Outstanding Warrants
Water Revenue Fund	$448,672.28	$60,596.31
Special Deposit Trust Fund	126,835.84	....
Land Purchase Fund	44,168.52	90.00
Extension Reserve Fund	299,256.79	50.00
Reconstruction and Replacement Fund	167,233.76	....
Bond Redemption Fund (1928)	1,004,000.00	....
Bond Interest Fund (1928)	718,762.50	....
Bond Interest Fund (1933)	83,600.00	....
Bond Fund (1933)	5,939.18	123.23
	$2,898,468.87	$60,859.54

SCHEDULE No. 4

SAN FRANCISCO WATER DEPARTMENT
SUMMARY OF INTERFUND ACCOUNTS

JUNE 30, 1940

ACCOUNTS RECEIVABLE

Public Service Enterprises:	
San Francisco Airport	$1,188.21
Municipal Railway	1,490.29
Hetch Hetchy Power Operative	489.22
Hetch Hetchy Water Supply	11,271.31
	$14,439.03
General City and County:	
Public Utilities Commission—Bureau of Engineering	$25,409.00
Fire Department	1,517.15
Department of Public Works	406.42
Park Department	20.08
P. U. C.—General Office	381.59
P. U. C.—Electric Power Bureau	951.42
	$28,685.66

ACCOUNTS PAYABLE

General City and County:	
Retirement System	$4,228.79
General Fund—Street and Public Buildings Lighting Department	25,767.48
General Fund—Contributions	402,898.00
General Fund—P. U. C.—Bureau of Engineering	2,190.61
General Fund—Department of Public Works	274.01
General Fund—Real Estate Department	630.91
	$435,989.80

SCHEDULE No. 5

SAN FRANCISCO WATER DEPARTMENT
SCHEDULE OF BONDED INDEBTEDNESS
JUNE 30, 1939

Spring Valley 4½% Bonds

Maturity	Amount
July 1, 1940	$1,000,000.00
July 1, 1941	1,000,000.00
July 1, 1942	1,000,000.00
July 1, 1943	1,000,000.00
July 1, 1944	1,000,000.00
July 1, 1945	1,000,000.00
July 1, 1946	1,000,000.00
July 1, 1947	1,000,000.00
July 1, 1948	1,000,000.00
July 1, 1949	1,000,000.00
July 1, 1950	1,000,000.00
July 1, 1951	1,000,000.00
July 1, 1952	1,000,000.00
July 1, 1953	1,000,000.00
July 1, 1954	1,000,000.00
July 1, 1955	1,000,000.00
July 1, 1956	1,000,000.00
July 1, 1957	1,000,000.00
July 1, 1958	1,000,000.00
July 1, 1959	1,000,000.00
July 1, 1960	1,000,000.00
July 1, 1961	1,000,000.00
July 1, 1962	1,000,000.00
July 1, 1963	1,000,000.00
July 1, 1964	1,000,000.00
July 1, 1965	1,000,000.00
July 1, 1966	1,000,000.00
July 1, 1967	1,000,000.00
July 1, 1968	1,000,000.00
July 1, 1969	1,000,000.00
July 1, 1970	1,000,000.00
	$31,000,000.00

1933 Water Distribution 4% Bonds

Maturity	Amount
December 1, 1940	$563,000.00
December 1, 1941	563,000.00
December 1, 1942	563,000.00
December 1, 1943	563,000.00
December 1, 1944	563,000.00
December 1, 1945	563,000.00
December 1, 1946	563,000.00
December 1, 1947	563,000.00
December 1, 1948	563,000.00
December 1, 1949	563,000.00
December 1, 1950	563,000.00
December 1, 1951	563,000.00
December 1, 1952	563,000.00
December 1, 1953	557,000.00
	$7,876,000.00

Total Bonds Outstanding June 30, 1940

Spring Valley Bonds	$31,000,000.00
1933 Water Distribution Bonds	7,876,000.00
Total	$38,876,000.00

SCHEDULE No. 6

OPERATING EXPENSES

RESERVOIRS AND SOURCES

	1936-37	1937-38	1938-39	1939-40
Inside of San Francisco:				
Lake Merced	$5,608.04	$5,100.63	$4,509.98	$4,715.04
Sunset Wells	60.81	......	......	......
Sunset Pump Supply Line	2,700.29	......	......	......
Central Pump Supply Line	19.55	......	......	......
City Pump Supply Line	185.99	......	......	......
	$8,574.68	$5,100.63	$4,509.98	$4,715.04
Outside of San Francisco:				
Surface Source				
San Andres Reservoir	$9,751.01	$17,946.48	$9,975.50	$9,944.67
Crystal Springs Reservoir	28,790.17	37,814.45	36,404.45	38,896.05
Pilarcitos Reservoir	14,433.70	15,294.02	16,264.90	21,044.70
Calaveras Reservoir	15,187.39	15,367.70	10,380.96	9,204.08
	$68,162.27	$86,422.65	$73,025.81	$79,089.50
Ground Source				
Sunol Filter Beds	$8,646.51	$8,291.48	$5,885.82	$8,109.27
Pleasanton Wells	27.96	79.80	6.00	198.28
	$8,674.47	$8,371.28	$5,891.82	$8,307.55
Supply Lines				
Bay Division Pipe Lines	$11,694.77	$14,006.52	$42,344.66	$23,104.48
Stone Dam Aqueduct	5,692.41	7,111.09	4,020.01	3,487.81
Pilarcitos Aqueduct	946.00	379.20	68.90	582.80
San Andres Aqueduct	57.16	......	21.75	......
Crystal Springs Pump Supply Line	40.91	123.14	95.47	9.99
Belmont Pump Supply Line	1.84	......	......	......
Niles-Irvington Pipe Line	457.21	668.70	397.70	174.67
Niles Supply Line	......	......	38.88	317.39
Pleasanton Pump Supply Line	5.03	......	......	......
Upper Alameda Tunnel	66.15	415.73	89.05	101.80
Upper Alameda Creek Diversion Dam	1,213.16	2,385.04	656.01	1,561.17
Calaveras Pipe Line	89.65	283.50	277.57	82.94
Newark-San Lorenzo Pipe Line	52.32	......	......	......
	$20,316.61	$25,372.92	$48,010.00	$29,423.05
Alameda System—General Expenses	$10,820.39	$15,820.05	$20,393.93	$22,060.73
Peninsula System—General Expenses	37,065.68	38,434.57	42,276.55	39.617.81
	$47,886.07	$54,254.62	$62,670.48	$61,678.54
Total Source of Supply Expense	$153,614.10	$179,522.10	$194,108.09	$183,213.68

SCHEDULE No. 7

OPERATING EXPENSES

TRANSMISSION AND DISTRIBUTION

	1936-37	1937-38	1938-39	1939-40
Inside of San Francisco				
San Andres Transmission Line No. 1	$946.16	$825.34	$130.41	$97.03
San Andres Transmission Line No. 2	......	......	3.34	......
San Andres Transmission Line No. 3	1,249,31	32.17	12.82	42.64
Bay Division Transmission Line	......	......	35.62	......
Crystal Springs Transmission Line	19.38	......	......	......
Lake Honda Transmission Line	154.33	125.58	......	303.86
Sunset Reservoir Transmission Line	......	......	28.86	......
Bay Bridge Pipe Line	......	......	......	20.03
City Distribution Reservoirs	12,923.78	22,937.97	28,619.22	32,223.78
Meter Expenses	77,231.63	58,703.54	50,867.27	47,096.71
Street Department Expenses	15,488.13	15,371.52	13,511.11	14,940.41
Main Repairs	56,239.04	55,428.02	62,522.06	73,449.70
Service Connection Repairs	63,003.71	71,325.33	67,809.97	68,679.01
Repairs to Buildings and Equipment	3,159.75	3,512.03	3,994.34	5,870.50
Miscellaneous Supplies and Expenses	6,043.09	5,954.67	4,385.07	5,341.90
Consumers' Premises Expenses*	......	......	......	......
Superintendence	30,908.88	33,037.83	34,618.84	35,864.26
Total in San Francisco	$267,367.19	$267,254.00	$266,538.93	$283,929.83
Outside of San Francisco				
Alameda Supply Line, "Old Section"	......	......	......	$453.53
Alameda Supply Line	$923.44	$559.57	$1,360.43	358.35
Alameda Transmission Line	5,939.04	4,019.87	3,415.62	2,867.71
Stone Dam Aqueduct	5.47	......	......	......
Crystal Springs Pump Aqueduct	6,300.69	5,673.53	3,360.51	2,874.61
New Crystal Springs Transmission Line	......	2,651.69	2,602.50	2,332.97
Old Crystal Springs Transmission Line	8,177.84	4,823.27	3,402.60	2,596.59
San Andres Transmission Line No. 1	1,769.84	2,186.01	3,112.16	1,690.75
San Andres Transmission Line No. 2	3,142.75	1,985.10	1,637.74	1,957.40
San Andres Transmission Line No. 3	1,082.11	547.24	806.72	942.16
Niles Reservoir	2,561.37	2,415.89	2,177.88	2,574.06
Palo Alto Pipe Line	......	......	195.33	356.89
Pleasanton Transmission Line	9.68	......	......	31.80
Meter Expenses	8,331.97	4,581.89	4,649.87	4,854.20
Total Outside of San Francisco	$38,244.20	$29,444.06	$26,721.36	$23,891.02
Total Transmission and Distribution Expenses	$305,611.39	$296,698.06	$293,260.29	$307,820.85

*Consumers' Premises Expenses Transferred to Commercial Expenses $11,027.23 $12,964.92 $13,495.97 $12,897.27

SCHEDULE No. 8

OPERATING EXPENSES

PUMP STATIONS

	1936-37	1937-38	1938-39	1939-40
Inside of San Francisco				
Steam Plants				
Central	$42,029.94	$41,255.56	$39,583.74	$44,339.54
City	2,359.99	423.47	566.28	483.11
Black Point	210.22	70.64	686.93	142.00
Clarendon Heights	447.98	297.96	540.85	1,750.83
Ocean View	......	......	28.09	79.47
	$45,048.13	$42,047.63	$41,405.89	$46,794.95
Electric Pumps				
Bay Bridge Pump—Treasure Island	......	$895.24	$7,675.73	$7,738.50
Precita Valley	$424.81	158.41	2,439.56	20.08
Forest Hill	4,617.88	3,799.56	3,987.91	5,503.89
Potrero Heights	204.92	134.48	222.32	266.15
Newcomb Avenue	561.55	719.59	609.77	820.38
Hillside	395.54	301.98	402.95	307.35
Fairview	164.94	84.78	175.26	264.16
Lincoln Park	388.81	96.21	181.58	315.19
Hunters Point	......	......	......	193.97
Twin Peaks	310.23	541.33	319.85	847.49
Lake Honda Booster	2,318.91	4.67	......	......
University	26.74	......	......	......
Leland Avenue	.17	57.16	70.79	1.45
Sunset Booster	2,204.91	2,000.35	1,659.35	349.15
Sunset Wells	3.03	......	......	......
Sunset Reservoir	......	25.39	......	......
Sunset Source	1,840.33	1,363.73	1,146.93	603.14
Olmstead	379.84	482.49	453.99	591.30
Bernal Heights	124.52	386.56	94.41	205.56
St. Germain	280.92	110.13	155.07	175.30
	$14,248.05	$11,162.06	$19,595.47	$18,203.06
Total Inside of San Francisco	$59,296.18	$53,209.69	$61,001.36	$64,998.01
Outside of San Francisco				
Belmont Pump	$3,300.23	$3,087.03	$3,125.78	$2,645.20
Millbrae Pump	352.33	423.07	342.03	530.25
Crystal Springs Pump	82,661.36	60,981.73	85,793.49	75,692.12
Bay Division Pump	6,188.15	8,313.50	25,498.41	5,073.23
Pleasanton Pump	5,753.78	3,860.71	2,877.18	3,690.33
Pleasanton Township Water District	3,568.62	3,050.34	2,044.53	2,285.98
San Lorenzo Pump	236.25	277.74	219.81	332.24
Calaveras Aerator	131.72	......	......	......
Total Outside of San Francisco	$102,192.44	$79,994.12	$119,901.23	$90,249.35
Total Pumping Expenses	$161,488.62	$133,203.81	$180,902.59	$155,247.36

SCHEDULE No. 9

OPERATING EXPENSES

PURIFICATION EXPENSES

	1936-37	1937-38	1938-39	1939-40
Inside of San Francisco				
College Hill	$1,017.83	$1,264.85	$1,476.21	$1,400.85
Lake Merced	104.38	......	......	......
Lake Honda	6,730.35	6,934.39	6,721.93	4,271.68
Lombard Street	......	......	6.18	14.23
Sunset	35.51	......	215.07	......
University Mound	1,199.40	2,650.90	1,371.31	1,327.57
Division General	8,742.23	1,147.24	26.64	7.36
Total Inside of San Francisco	$17,829.70	$11,997.38	$9,817.34	$7,021.69
Outside of San Francisco				
Belmont Purification System	$314.97	$414.88	$115.01	......
Calaveras Reservoir	856.01	3,409.58	759.43	$4,403.53
Calaveras Aerator	1,916.96	1,346.80	1,753.40	1,644.99
Calaveras Chlorinator	5,741.51	4,962.18	7,036.77	2,882.18
Crystal Springs	5,245.82	9,989.94	8,058.17	4,749.79
Hetch Hetchy Junction	3,972.23	4,880.56	290.18	......
Irvington Portal	6,828.28	2,194.73	2,755.39	3,779.01
Millbrae Laboratory	3,653.00	21,256.39	23,101.80	22,588.74
Pilarcitos Reservoir	176.29	191.79	33.90	124.51
Portable Chlorinating Unit	4.95	......	59.16	19.48
San Andres Reservoir	1,724.81	1,340.71	828.77	1,627.25
San Andres System No. 1	1,776.60	1,044.47	1,076.87	2,427.63
San Andres System No. 2	2,691.35	3,489.17	2,628.03	2,633.27
San Andres System No. 3	......	......	6.75	87.55
San Mateo Screen Tank	271.16	179.38	26.62	26.50
Sunol	1,514.69	1,861.15	2,043.90	1,004.87
Tesla Portal	......	4,089.04	3.692.78	12,573.28
Division General—Peninsula	3,757.37	40.69	263.72	......
Division General—Alameda	516.00	93.48	......	......
Total Outside of San Francisco	$40,962.00	$60,784.94	$54,530.65	$60,572.58
Total Purification Expense	$58,791.70	$72,782.32	$64,347.99	$67,594.27

SCHEDULE No. 10

OPERATING EXPENSES

	1936-37	1937-38	1938-39	1939-40
Commercial Expenses				
Collections	$110,112.43	$113,001.22	$113,841.97	$114,973.80
Reading Meters	33,621,49	33,476.94	34,466.32	38,105.87
Bookkeeping Department	99,556.36	99,242.59	106,249.31	106,703.91
General and Miscellaneous	31,652.69	33,097.28	32,944.42	34,491.24
Inspection and Service	46,568.49	50,465.42	47,193.84	47,148.35
Shipping	14,227.02	14,283.38	14,402.13	14,328.35
Consumers' Premises Expenses*	11,027.23	12,964.92	13,495.97	12,897.27
	$346,765.71	$356,531.75	$362,593.96	$368,648.79
General and Miscellaneous				
Salaries of General Officers	$18,399.99	$18,399.84	$18,399.84	$18,684.27
Salaries of General Office Clerks	36,512.70	40,628.25	41,231.95	45,543.20
Miscellaneous General Office Supplies and Expenses	10,426.91	8,908.86	10,039.18	10,123.92
Public Utilities Expenses	47,269.51	52,522.00	45,209.10	44,622.32
General Engineering	34,661.99	33,689.62	32,556.72	43,252.90
Hydrography	2,669.32	2,104.77	2,809.79	2,399.53
Telephone Services	15,469.80	15,294.47	15,563.54	15,689.23
Mason Street Building Operations	22,392.70	21,568.76	21,876.60	21,791.78
Rest Room and Guest Cottages	2,010.14	2,245.17	1,521.98	1,858.44
Advisory and Consulting Expenses	5,975.00	7,293.75	7,300.00	7,300.00
Repairs—Mason Street Building	6,143.47	11,011.56	7,195.67	5,471.23
Repairs—General Structures	3,857.97	......	......	......
Repairs—Telephone Systems	5,355.97	8,774.90	5,893.49	4,909.44
	$211,145.47	$222,441.95	$209,597.86	$221,646.26
Other Operating Expenses				
Insurance—Compensation	$4,485.16	$4,683.83	$8,737.60	$8,901.19
Insurance—Other	5,659.01	5,282.72	5,952.15	4,723.56
Injuries and Damages	3,061.80	1,129.46	1,853.59	3,028.85
Pensions	38,843.82	39,860.19	37,883.23	38,217.82
Property Taxes	193,057.21	240,130.61	257,488.21	235,503.86
Miscellaneous—General	720.00	749.20	766.70	756.00
	$245,827.00	$291,836.01	$312,681.48	$291,131.28
Repairs—Extraordinary				
Calaveras Spillway	......	......	51,973.71	......
Newark Slough Submarine Pipe Line	......	......	23,283.58	......
Professional Services—Extraordinary Depreciation Survey	......	......	23,017.12	......
	$456,972.47	$514,277.96	$620,553.75	$512,777.54

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*Transferred from Transmission and Distribution Expenses.

SCHEDULE No. 11

OPERATING EXPENSES—1939-40
City Distribution Division

PUMPING STATIONS ACCOUNT

	Labor	Use of Equipment	Materials and Supplies	Fuel or Power	Lubricants	Machine Shop	Contractual Service	Total
STEAM PUMPS								
Central	$27,507.21	$51.45	$1,188.97	$14,926.77	$44.13	$620.79	$0.22	$44,339.54
City	446.40	.30	16.81			19.60		483.11
Black Point							142.00	142.00
Ocean View	27.00	1.35	31.68			19.44		79.47
Clarendon Heights	1,138.71	37.05	539.72			24.59	10.76	1,750.83
	$29,119.32	$90.15	$1,777.18	$14,926.77	$44.13	$684.42	$152.98	$46,794.95
ELECTRIC PUMPS								
Bay Bridge—Treasure Island	$3,030.01	$26.66	$95.23	$4,513.99		$48.61	$24.00	$7,738.50
Precita Valley	2.25		2.83				15.00	20.08
Forest Hills	1,020.52	131.69	507.80	3,058.30	$41.06	659.56	84.96	5,503.89
Potrero Heights	123.93	18.17	1.50	89.80		32.75		266.15
Newcomb Avenue	164.09	20.31	13.73	580.04		42.21		820.38
Hillside	76.40	9.96	23.61	183.40		13.98		307.35
Fairview	113.03	12.45	11.08	30.12		23.10	74.38	264.16
Lincoln Park	165.71	19.02	23.16	16.52		90.78		315.19
Hunters Point	143.06	15.48	26.50	5.40		3.53		193.97
Twin Peaks	142.09	18.66	59.44	559.63		67.67		847.49
Leland Avenue			1.45					1.45
Sunset Booster	329.34	15.78	4.03					349.15
Sunset Source	318.48	19.60	58.10			206.96		603.14
Olmstead Avenue	165.54	15.30	4.96	386.18		19.32		591.30
Bernal Heights	136.97	14.40	4.71	47.72		1.76		205.56
St. Germain	103.23	8.61	6.76	18.92		37.78		175.30
	$6,034.65	$346.09	$844.89	$9,490.02	$41.06	$1,248.01	$198.34	$18,203.06
	$35,153.97	$436.24	$2,622.07	$24,416.79	$85.19	$1,932.43	$351.32	$64,998.01

SCHEDULE No. 12

OPERATING EXPENSES—1939-40

City Distribution Division

SOURCE OF SUPPLY	Labor	Use of Equipment	Materials and Supplies	Machine Shop	Contractual Service	Paving	Miscellaneous	Total
Lake Merced	$4,224.54	$29.34	$346.01	$46.57	$68.58	....	....	$4,715.04
PURIFICATION								
College Hill	$36.09	$5.73	$971.24	$200.51	$187.28	....	....	$1,400.85
Lake Honda	3,964.15	4.77	288.18	14.58	....	....	....	4,271.68
Lombard Street	1.87	....	12.36	....	....	....	....	14.23
University Mound	50.30	8.82	1,253.97	11.70	2.78	....	....	1,327.57
General	1.75	.30	5.31	....	....	....	....	7.36
	$4,054.16	$19.62	$2,531.06	$226.79	$190.06	....	....	$7,021.69
TRANSMISSION AND DISTRIBUTION								
San Andres Transmission Line No. 1	$61.96	$1.44	$25.77	$7.86	....	....	....	$97.03
Lake Honda Transmission Line	225.13	22.90	34.77	21.06	....	....	....	303.86
San Andres Transmission Line No. 3	30.39	6.15	6.10	....	....	....	....	42.64
Bay Bridge Pipe Line	19.13	.90	....	....	....	....	....	20.03
City Reservoirs	25,217.90	1,060.81	3,293.08	1,371.88	$1,280.11	....	....	32,223.78
Meter Expenses	22,764.70	1,838.29	17,924.68	697.09	214.19	$4,032.44	*$374.68*	47,096.71
Street Department Expenses	14,181.07	695.27	23.51	....	40.56	....	....	14,940.41
Miscellaneous Suppplies and Expenses	2,160.50	46.59	1,388.12	645.65	1,091.47	....	9.57	5,341.90
Superintendence	34,165.21	1,069.84	141.04	3.57	484.60	....	....	35,864.26
Consumers' Premises Expenses*	....	....	....	....	....	....	....	....
Repairs to Distribution Mains and Canals	48,069.58	4,756.69	8,879.77	5,290.77	2,796.15	3,405.71	251.03	73,449.70
Repairs to Service Connections	38,909.84	6,963.81	9,270.83	1,251.44	4,248.79	7,703.03	331.27	68,679.01
Repairs to Buildings and Equipment	1,861.14	53.57	1,642.68	2,246.13	66.98	....	....	5,870.50
	$187,666.55	$16,516.26	$42,630.35	$11,535.45	$10,222.85	$15,141.18	$217.19	$283,929.83
Total City Distribution Division	$195,945.25	$16,565.22	$45,507.42	$11,808.81	$10,481.49	$15,141.18	$217.19	$295,666.56

*Consumers' Premises Expenses Transferred to Commercial Expenses.

Italic figures denote loss and deficiency.

SCHEDULE No. 13

OPERATING EXPENSES—1939-40

Outside of San Francisco

SOURCE OF SUPPLY	Labor	Use of Equipment	Materials and Supplies	Machine Shop	Contractual Service	Miscel-laneous	Total
SURFACE SOURCES							
San Andres Reservoir	$8,214.37	$185.92	$525.96	....	$1,018.42	....	$9,944.67
Crystal Springs Reservoir	28,591.98	1,721.85	4,923.43	....	3,658.79	....	38,896.05
Pilarcitos Reservoir	16,566.81	699.03	2,158.64	....	1,620.22	....	21,044.70
Calaveras Reservoir	6,839.69	396.24	779.36	9.64	1,179.15	....	9,204.08
	$60,212.85	$3,003.04	$8,387.39	$9.64	$7,476.58	....	$79,089.50
GROUND SOURCES							
Sunol Filter Beds	$5,626.52	$267.18	$725.74	....	$1,489.83	....	$8,109.27
Pleasanton Wells	1.56	....	196.72	....	....	....	198.28
	$5,628.08	$267.18	$922.46	....	$1,489.83	....	$8,307.55
SUPPLY LINES							
Bay Division Pipe Lines	$18,066.91	$1,834.32	$2,473.74	$10.36	$719.15	....	$23,104.48
Stone Dam Aqueduct	3,182.91	146.68	151.24	....	6.98	....	3,487.81
Pilarcitos Aqueduct	465.56	46.40	70.84	....	....	....	582.80
Crystal Springs Supply Line	....	....	9.99	....	....	....	9.99
Niles-Irvington Pipe Line	44.33	117.84	....	....	12.50	....	174.67
Upper Alameda Tunnel	91.72	10.08	....	....	....	....	101.80
Upper Alameda Creek Dam	1,424.97	133.11	3.09	....	....	....	1,561.17
Calaveras Pipe Line	....	66.38	16.56	....	....	....	82.94
Niles Supply Line	229.90	9.50	77.99	....	....	....	317.39
	$23,506.30	$2,364.31	$2,803.45	$10.36	$738.63	....	$29,423.05
GENERAL EXPENSES							
Alameda System	$17,712.45	$892.83	$3,031.93	$17.83	$690.14	*$284.45*	$22,060.73
Peninsula System	33,002.73	1,742.10	6,216.93	....	2,850.70	*4,194.65*	*39,617.81
	$50,715.18	$2,634.93	$9,248.86	$17.83	$3,540.84	*$4,479.10*	$61,678.54
	$140,062.41	$8,269.46	$21,362.16	$37.83	$13,245.88	*$4,479.10*	$178,498.64

*Refunds (Board, Room and Lodging).

Italic figures denote loss and deficiency.

SCHEDULE No. 14

OPERATING EXPENSES—1939-40

Outside of San Francisco

	Labor	Use of Equipment	Materials and Supplies	Fuel or Power	Machine Shop	Contractual Service	Total
PUMPING STATIONS							
Belmont Pump	$2,488.20	$42.87	$13.96	$100.17	....	....	$2,645.20
Millbrae Pump	516.38	5.13	8.74	....	....	....	530.25
Crystal Springs Pump	8,838.80	712.29	465.45	65,361.24	....	$314.34	75,692.12
Bay Division Pump	2,679.93	95.04	319.49	1,959.82	....	18.95	5,073.23
Pleasanton Pumps	2,546.72	59.78	98.58	985.25	....	....	3,690.33
Pleasanton Township Water District	1,021.55	27.78	110.19	1,112.96	....	13.50	2,285.98
San Lorenzo Pump	144.58	187.66	....	....	....	....	332.24
Outside Pumping Expenses	$18,236.16	$1,130.55	$1,016.41	$69,519.44	....	$346.79	$90,249.35
PURIFICATION							
Calaveras Reservoir	$1,115.70	$101.04	$2,911.79	....	....	$275.00	$4,403.53
Calaveras Aerator	631.23	105.81	66.37	....	$388.65	452.93	1,644.99
Calaveras Chlorinator	381.94	184.14	2,315.20	....	....	.90	2,882.18
Crystal Springs	824.84	95.99	3,376.81	....	....	452.15	4,749.79
Irvington Portal	1,242.98	136.95	1,912.77	....	....	486.31	3,779.01
Millbrae Laboratory	17,121.34	1,922.23	1,463.01	....	7.80	2,074.36	22,588.74
Pilarcitos Reservoir	31.50	1.08	91.93	....	....	....	124.51
Portable Chlorinating Unit	4.75	2.25	14.48	....	....	....	21.48
San Andres Reservoir	408.11	17.82	896.53	....	....	304.79	1,627.25
San Andres System No. 1	186.71	30.75	2,080.47	....	....	129.70	2,427.63
San Andres System No. 2	236.28	64.98	2,218.22	....	....	113.79	2,633.27
San Andres System No. 3	....	....	87.55	....	....	....	87.55
San Mateo Screen Tank	22.27	4.23	....	....	....	....	26.50
Sunol	501.13	5.34	496.83	....	....	1.57	1,004.87
Tesla Portal	845.33	617.38	10,122.77	....	....	987.80	12,573.28
Outside Purification Expenses	$23,554.11	$3,289.99	$28,054.73	....	$396.45	$5,279.30	$60,574.58
TRANSMISSION AND DISTRIBUTION							
Alameda Supply Lines	$34.29	$268.25	$31.61	....	....	$24.20	$358.35
Alameda Transmission Line	2,211.08	133.31	434.65	....	....	88.67	2,867.71
Crystal Springs Pump Aqueduct	2,770.02	53.55	51.04	....	....	....	2,874.61
Crystal Springs Transmission Line (old)	1,742.66	378.15	181.62	....	....	30.54	2,332.97
San Andres Transmission Line No. 1	1,578.92	38.11	46.81	....	....	26.91	1,690.75
San Andres Transmission Line No. 2	1,525.83	131.38	293.35	....	....	6.84	1,957.40
San Andres Transmission Line No. 3	807.31	32.53	35.88	....	....	66.44	942.16
Crystal Springs Transmission Line (new)	2,349.27	216.54	28.38	....	....	2.40	2,596.59
Meter and Fitting Expenses	3,073.83	776.93	944.88	....	....	58.56	4,854.20
Palo Alto Pipe Line	210.34	56.17	89.09	....	....	1.29	356.89
Alameda Supply Line (old section)	7.69	222.72	146.71	....	....	76.41	453.53
Niles Regulating Reservoir	2,496.18	28.42	45.15	....	$2.66	1.65	2,574.06
Pleasanton Transmission Line	30.00	1.80	....	....	....	....	31.80
Outside Transmission Line Expenses	$18,837.42	$2,337.86	$2,329.17	....	$2.66	$383.91	$23,891.02

SCHEDULE No. 15

OPERATING EXPENSES—1939-40

					Contractual Service				
	Labor	Use of Equipment	Materials and Supplies	Machine Shop	Bank Collections	Other	Fixed Charges	Miscel-laneous	Total
COMMERCIAL EXPENSES									
Collections	$86,213.80	$1,421.18	$1,292.99	....	$24,753.90	$1,291.93	....	....	$114,973.80
Reading Meters	36,637.76	583.45	148.60	....	....	736.06	....	....	38,105.87
Bookkeeping Department	102,399.83	....	3,158.14	....	....	1,145.94	....	....	106,703.91
General and Miscellaneous	24,211.62	494.18	1,640.74	182.27	....	7,962.43	....	....	34,491.24
Inspection and Service	37,984.49	6,176.07	1,562.03	43.53	....	1,382.23	....	....	47,148.35
Shipping	9,445.75	245.29	690.26	....	....	3,947.05	....	....	14,328.35
*Consumers' Premises Expense	12,688.23	....	....	....	....	209.04	....	....	12,897.27
	$309,581.48	$8,920.17	$8,492.76	$225.80	$24,753.90	$16,674.68	....	....	$368,648.79
GENERAL AND MISCELLANEOUS									
Salary of General Officers	$18,684.27	....	....	....	....	....	....	....	$18,684.27
Salary of General Office Clerks	45,543.20	....	....	....	....	....	....	....	45,543.20
Office Supplies and Expenses	....	....	$2,028.17	....	....	$3,045.50	....	....	5,073.67
Public Utilities Commission Expenses	290.32	....	....	....	....	....	....	$44,332.00	44,622.32
General Engineering	33,531.67	$1,828.91	1,639.34	....	....	3,527.34	....	2,725.64	43,252.90
Hydrography	1,794.33	62.00	185.32	....	....	357.88	....	....	2,399.53
Telephone Services	7,710.25	.60	....	....	....	7,978.38	....	....	15,689.23
Mason St. Building Operations	15,145.31	....	371.85	....	....	6,274.62	....	....	21,791.78
Mason St. Building Repairs	800.46	136.51	1,118.69	$1,096.33	....	1,239.24	....	1,080.00	5,471.23
Rest Room and Guest Cottages	1,031.92	37.77	482.04	....	....	306.71	....	....	1,858.44
Advisory and Consulting	....	....	....	....	....	7,300.00	....	....	7,300.00
Repairs to Telephone Systems	3,847.29	747.13	277.42	....	....	37.60	....	....	4,909.44
Miscellaneous Supplies and Expenses	1,126.14	11.25	3,716.99	....	....	195.87	....	....	5,050.25
	$129,505.16	$2,824.17	$9,819.82	$1,096.33	....	$30,263.14	....	$48,137.64	$221,646.26
OTHER OPERATING EXPENSES									
Insurance Compensation	....	....	....	....	....	....	$8,901.19	....	$8,901.19
Insurance, Other	....	....	....	....	....	....	4,723.56	....	4,723.56
Injuries and Damages	....	....	....	....	....	....	3,028.85	....	3,028.85
Pensions	....	....	....	....	....	....	38,217.82	....	38,217.82
Property Taxes	....	....	....	....	....	....	235,503.86	....	235,503.86
Miscellaneous	....	....	....	....	....	....	756.00	....	756.00
	....	....	....	....	....	....	$291,131.28	....	$291,131.28
	$129,505.16	$2,824.17	$9,819.82	$1,096.33	....	$30,263.14	$291,131.28	$48,137.64	$512,777.54

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*Transferred from Transmission and Distribution Expenses.

SCHEDULE No. 16

ADDITIONS, BETTERMENTS AND REPLACEMENTS, 1939-1940

	Additions	Retirements	Labor	Use of Equipment	Contract Payments	Equipment Including Meters	Materials and Supplies	Contractual Service	Departmental Overhead	Paving
1015—Landed Capital										
Purchases of Land	$3,067.07							$3,067.07		
Sale of Land		$2,637.50								
Retirement of Fixed Capital—6-30-40		203.00								
	$3,067.07	$2,840.50						$3,067.07		
1020—Buildings, Structures and Grounds										
Building Construction	$1,953.98		$681.76				$151.69	$1,014.82	$105.71	
Retirements—6-30-40		$1,598.25								
	$1,953.98	$1,598.25	$681.76				$151.69	$1,014.82	$105.71	
1025—Source of Water Supply										
Replacements—Calaveras Stilling Basin	$272,263.81		$27,062.81	$2,664.23	$233,977.49		$179.78	$4,269.67	$4,109.83	
Improvements—Pulgas Water Temple	3,866.07		55.24	12.00	3,475.00			315.30	8.53	
Retirements—6-30-40		$8,176.65								
	$276,129.88	$8,176.65	$27,118.05	$2,676.23	$237,452.49		$179.78	$4,584.97	$4,118.36	
1030—Pumping Station Equipment										
Improvements—Hunters Point	$1,010.91						$1,010.91			
Retirements—6-30-40		$450.00								
	$1,010.91	$450.00					$1,010.91			
1035—Purification Capital										
Barge, Camera and Misc. Equipment	$2,441.22					$2,441.22				
1040—Transmission and Distribution										
Main Extensions—City Pipe Line	$120,362.86		$19,846.30	$1,496.20	$25,655.95		$65,226.13	*$428.17*	$2,906.99	$5,659.46
Meters Installed	42,778.58		3,305.16	398.91		$30,802.48	7,088.47	383.91	479.29	320.36
Services	41,676.57		17,485.23	4,247.67			10,270.36	1,309.02	2,525.25	5,839.04
Retirements—6-30-40		$30,571.06								
	$204,818.01	$30,571.06	$40,636.69	$6,142.78	$25,655.95	$30,802.48	$82,584.96	$1,264.76	$5,911.53	$11,818.86
1045—General Equipment										
Office Furniture and Fixtures	$12,888.79					$12,888.79				
Retirements—6-30-40		$4,860.00								
	$12,888.79	$4,860.00				$12,888.79				
1046—Automobiles										
New Equipment and Replacements	$10,557.24					$10,557.24				
Retirements—6-30-40		$3,572.00								
	$10,557.24	$3,572.00				$10,557.24				
Grand Total—Gross	$512,867.10	$52,068.46	$68,436.50	$8,819.01	$263,108.44	$56,689.73	$83,927.34	$9,931.62	$10,135.60	$11,818.86
Net Increase		$460,798.64								
	$512,867.10	$512,867.10								

Italic figures denote loss and deficiency.

APPENDIX

TO

REPORT OF SAN FRANCISCO WATER DEPARTMENT

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TABLE No. 1

RAINFALL BY MONTHS FOR SAN FRANCISCO
SEASONS 1936-37 TO 1939-40
From U. S. Weather Bureau

Month	Season 1936-37	Season 1937-38	Season 1938-39	Season 1939-40	Normal
July	0.03	T	0.01	T	0.02
August	0.02	T	0	T	0.01
September	T	T	0.15	1.06	0.45
October	0.69	0.90	1.33	0.17	1.12
November	0.01	2.46	0.88	0.20	2.35
December	2.94	3.73	1.48	1.05	3.95
January	5.26	2.65	3.07	9.98	4.54
February	4.88	8.49	1.94	7.81	3.93
March	7.05	5.73	2.62	5.32	3.14
April	0.86	1.52	0.42	0.94	1.61
May	0.06	T	0.63	0.63	0.80
June	0.59	0	T	0.01	0.18
Totals	22.39	25.48	12.53	27.17	22.10

"T" trace, amount too small to measure. 1939-40 Season—122.9% of normal.

TABLE No. 1-A

SEASONAL RAINFALL—WATERSHED STATIONS
SEASONS 1936-37 TO 1939-40
Water Department Records

Station	Season 1936-37	Season 1937-38	Season 1938-39	Season 1939-40	Normal
San Francisco	22.39	25.48	12.53	27.17	22.10
Pilarcitos	43.90	51.58	25.56	51.66	45.83
San Andres	34.85	40.64	18.66	38.77	38.56
Crystal Springs—Upper	31.90	37.00	18.41	35.07	33.04
Crystal Springs—Lower	30.76	35.81	18.50	30.88	28.16
Crystal Springs Cottage	28.79	34.66	16.01	35.47	25.91
Lake Merced	24.15	26.91	13.22	28.05	21.20
Pleasanton	22.09	25.89	12.61	24.69	21.80
Calaveras	23.18	26.92	15.86	25.42	25.05
Sunol	21.50	25.75	14.87	23.41	21.02
Niles	19.34	22.09	13.61	21.89	20.31
Hetch Hetchy	37.23	55.60	25.59	41.47	33.16
Lake Eleanor	46.08	64.61	30.79	53.47	40.12
Moccasin	31.68	41.22	19.58	35.06	25.75

TABLE No. 2

STORAGE IN MILLION GALLONS
(Exclusive of Hetch Hetchy Sources)

	1937		1938		1939		1940	
	Max. Mar. 31	Min. Dec. 9	Max. Mar. 25	Min. Mar. 7-'39	Max. Apr. 12	Min. Dec. 14	Max. Apr. 9	As of June 30
Calaveras	31,463	16,766	31,569	9,493	10,650	7,784	30,479	27,071
Crystal Springs	18,789	17,741	20,170	16,941	17,215	14,111	19,347	18,417
San Andres	6,048	4,797	5,876	4,719	5,230	5,580	6,124	5,827
Pilarcitos	858	258	929	346	442	258	840	740
Lake Merced	1,882	1,835	2,233	2,343	2,398	2,207	2,588	2,544
City Reservoirs	120	125	133	151	151	257	262	190
Total	59,160	41,522	60,910	33,993	36,086	30,197	59,640	54,789

TABLE No. 3

WATER DRAWN FROM HETCH HETCHY AND AUXILIARY SOURCES

(Million Gallons)

	1936-37	1937-38	1938-39	1939-40
Hetch Hetchy Water Supply	10,287	1,181	7,510	14,814
Pleasanton Wells	417*	352*	203*	221*
Sunset Wells	9	...	...	...
Total	10,713	1,533	7,713	15,035

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*For local consumption only.

TABLE No. 4

SEASONAL DRAFT ON SURFACE STORAGE AND AUXILIARY SOURCES

1	2	3	4	5	6	7	8	9
				Seasonal Draft on Storage and Auxiliary Sources				
Year	Maximum Storage	Minimum Storage	Storage Increase During Season	Storage Decrease During Season	From Pleasanton Wells	From Sunset Wells	From E.B.M.U.D. and H.H.W.S.	Total Seasonal Draft
1918	20,388	12,382	....	8,006	3,603	....	....	11,609
1919	22,388	13,160	10,006	9,228	2,000	....	....	11,228
1920	16,578	9,986	3,418	6,592	2,871	....	....	9,463
1921	19,788	11,502	9,802	8,286	317	....	....	8,603
1922	20,091	12,770	8,589	7,321	397	....	....	7,718
1923	22,649	11,721	9,879	10,928	515	....	....	11,443
1924	11,721	4,266	0	7,455	4,726	....	....	12,181
1925	13,585	4,959	9,319	8,626	2,666	....	....	11,292
1926	17,859	9,618	12,900	8,241	2,536	....	....	10,777
1927	30,581	20,000	20,963	10,581	2,104	....	....	12,685
1928	30,687	18,657	10,687	12,030	762	....	....	12,792
1929	20,265	8,906	1,608	11,359	4,054	....	....	15,413
1930	16,475	6,441	7,569	10,034	4,073	341	....	14,448
1931	6,779	4,291	338	2,488	3,812	2,054	7,731	16,085
1932	30,916	18,650	26,625	12,266	277	2,083	158	14,784
1933	23,389	12,158	4,739	11,231	257	1,991	0	13,479
1934	16,998	7,246	4,840	9,752	2,655	1,914	1,390	15,711
1935	31,298	18,883	24,052	12,415	412	1,209	5,928	*19,964
1936	44,209	37,922	25,326	6,287	409	9	10,776	*17,481
1937	59,160	41,522	21,238	17,638	386	....	1,605	*19,629
1938	60,910	33,993	19,388	26,917	222	....	285	*27,424
1939	36,086	30,197	2,093	5,889	221	....	15,490	*21,600
1940	59,640	....	29,443	....	....	....	....	....
Average	27,497	15,873	11,947	10,163	1,785	436	1,971	14,355

NOTE: Column 9 does not include water drawn for consumption directly from run-off. It represents depletion in storage during dry season if all the water for consumption during dry season were drawn from storage.

*Include the following quantities.

1935 4,702 m.g. Advance Release to Alameda County Water District.
1936 1,585 m.g. " " " " " " "
1937 3,395 m.g. " " " " " " "
1938 1,992 m.g. " " " " " " "
1938 10,200 m.g. Released down Alameda Creek, etc.
1939 1,022 m.g. Advance Release to Alameda Co. Water District.

TABLE No. 5

CONSUMPTION IN MILLION GALLONS PER DAY

Year	San Francisco	Suburban	Total System	Max. Day	Min. Day	Max. Month	Min. Month
1930-31	49.2	3.1	52.3	66.7	41.3	57.8	47.0
1931-32	49.3	2.8	52.1	65.6	39.6	59.4	47.5
1932-33	46.4	2.7	49.1	60.4	39.9	54.3	44.6
1933-34	47.3	2.6	49.9	64.3	39.1	53.7	45.1
1934-35	48.1	2.4	50.5	65.4	41.3	58.1	46.2
1935-36	52.3	2.5	54.8	68.0	43.0	62.1	50.3
1936-37	55.1	3.4	58.5	70.7	45.7	63.8	51.8
1937-38	53.3	5.0	58.3	72.4	46.7	65.4	53.4
1938-39	56.2	6.4	62.6	84.6	48.5	77.5	54.8
1939-40	59.6	9.0	68.6	89.5	51.6	76.6	60.9

TABLE No. 5-A

AVERAGE DAILY CONSUMPTION SINCE 1865

Year	M.G.D.	Year	M.G.D.	Year	M.G.D.	Year	M.G.D.
1865	2.4	1885	17.0	1905	34.9	1925	42.6
1870	6.0	1890	20.4	1910	35.6	1928	50.1
1875	11.7	1895	19.9	1915	42.6	1929	52.1
1880	12.7	1900	25.5	1920	36.2	1930	52.1

TABLE No. 6

DELIVERY THROUGH PIPE LINES IN MILLION GALLONS DAILY

Water Transported into San Francisco:	1936-37	1937-38	1938-39	1939-40
San Andres 54″ Pipe	26.9	28.8	28.7	25.6
College Hill 30″ Supply Line	7.3	6.0	6.5	7.0
Baden-Merced Branch 30″ Pipe	2.4	0.6	3.0	7.5
Crystal Springs 44″ Pipe	15.9	0.0	0.0	2.5
Crystal Springs 60″ Pipe	2.6	17.9	18.0	17.0
Total San Francisco Consumption	55.1	53.3	56.2	59.6
Water Transported from Crystal Springs to San Andres Reservoir:				
Crystal Springs Pump Aqueduct	29.5	20.4	35.6	28.6
Water Transported Across S. F. Bay:				
Bay Division 60″ and 72″ Pipes	50.1	31.2	62.3	51.6
Alameda 36″ Pipe	0.0	0.0	0.9	0.0
	50.1	31.2	63.2	51.6

TABLE No. 7

SOURCE OF WATER TRANSPORTED ACROSS SAN FRANCISCO BAY YEARLY AVERAGE MILLION GALLONS DAILY

	1936-37	1937-38	1938-39	1939-40
Pleasanton Wells	0.0	0.0	0.0	0.0
Sunol Filters and Calaveras Reservoir	22.6	31.2	43.6	13.4
Hetch Hetchy Water Supply	27.5	0.0	19.6	38.2
	50.1	31.2	63.2	51.6

TABLE No. 8

COMPARATIVE PUMPING COSTS

SAN ANDRES PUMP	1936-37	1937-38	1938-39	1939-40
Water pumped, gallons	10,749,520,000	7,458,450,000	12,996,240,000	10,451,172,000
Electric Power, KWH	10,454,275	6,560,000	12,006,400	9,846,400
Power Cost	$73,045.02	$50,287.10	$74,680.62	$65,361.24
Labor Cost	7,695.32	8,894.36	9,458.18	8,838.80
Miscellaneous	1,707.80	1,785.27	1,654.69	1,492.08
	$82,448.14	$60,966.73	$85,793.49	$75,692.12
Cost per mil. gal	7.67	8.17	6.60	7.24
Cost per mil. gal. ft	.0341	.0376	.0301	.0329

PULGAS PUMPS	1936-37	1937-38	1938-39	1939-40
Water pumped, gallons			1,766,305,000	Not
Electric Power, KWH			1,993,600	Operating
Power Cost	$2,425.31	$3,117.90	$17,992.42	$1,959.82
Labor Cost	3,176.17	4,722.07	6,755.34	2,679.93
Miscellaneous	579.35	473.53	750.65	433.48
	$6,180.83	$8,313.50	$25,498.41	$5,073.23
Cost per mil. gal			14.44	
Cost per mil. gal. ft			.0627	

CENTRAL PUMPS	1936-37	1937-38	1938-39	1939-40
Water pumped, gallons	2,652,123,000	2,489,930,000	2,605,931,000	2,676,500,000
Gas burned, cu. ft	66,077,000	53,370,000	73,098,000	108,515,000
Oil burned, gals	18,647	141		
Fuel Cost	$11,298.12	$10,593.36	$11,096.62	$14,926.77
Labor Cost	28,499.03	28,619.35	26,900.94	27,507.21
Miscellaneous	2,621.20	1,973.56	1,586.18	1,905.56
	$42,418.35	$41,186.27	$39,583.74	$44,339.54
Cost per mil. gal	15.99	16.54	15.19	16.57

Note: Pulgas Pumps only operated intermittently since October, 1934.

TABLE No. 9

AVERAGE DAILY CONSUMPTION BY DISTRICTS

District	1939-40	1938-39	Increase or Decrease	Per Cent Increase or Decrease
Forest Hill	376,233	330,417	+45,816	+13.9
Stanford Heights	7,307,881	7,145,342	+162,539	+2.3
Lake Honda	24,131,658	23,362,374*	+769,284	+3.3
College Hill	7,559,080	6,770,243	+788,837	+11.7
University Mound	19,528,921	18,043,079	+1,485,842	+8.2
Merced Manor	666,664	585,421	+81,243	+13.9
Total City	59,570,437	56,236,876*	+3,333,561	+5.9
Suburban	9,005,970	6,332,893	+2,673,077	+42.2
Total Entire System	68,576,407	62,569,769*	+6,006,638	+9.6

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*Affected by correction of Venturi meter in 54″ San Andres Supply Line.

TABLE No. 9-A

PEAK CONSUMPTION BY DISTRICTS

District	1939-40	1938-39	1937-38
Forest Hill	639,823	611,313	496,384
Stanford Heights	9,805,000	9,384,000	8,842,000
Lake Honda	30,482,030	27,677,793*	26,386,346
College Hill	9,951,000	9,035,000	8,458,714
University Mound	24,737,000	22,313,000	21,968,000
Merced Manor	1,671,000	1,750,000	1,459,000
San Francisco (combined)	74,355,000	67,045,000*	65,710,000
Suburban	15,418,000	16,349,000	11,295,000
System Peak	89,543,000	83,135,000*	72,359,000

*Affected by correction of Venturi meter in 54″ San Andres supply line.

TABLE No. 10

UNIT COST FOR METER MAINTENANCE

Year	Meters In Use	Total Cost	Cost Per Meter	Labor Cost Per Meter	Material Cost Per Meter
1934-35	115,881	$44,031.65	$0.38	$0.210	$0.119
1935-36	114,482	65,775.43	0.58	0.296	0.203
1936-37	116,606	77,231.63	0.66	0.318	0.214
1937-38	117,424	58,703.54	0.50	0.278	0.172
1938-39	120,027	50,867.27	0.42	0.237	0.119
1939-40	122,800	47,096.71	0.38	0.185	0.146

TABLE No. 11

UNIT COST OF METER INSTALLATION

	1939-40	1938-39	1937-38	1936-37
Meters set	4,165	3,651	2,597	3,257
Per cent ¾″ and smaller	94.8	94.3	90.8	92.0
Labor	$0.79	$1.14	$0.98	$1.08
Supervision	0.12	0.17	0.09	0.28
Meter	9.35	8.65	9.58	9.92
Material	1.70	2.01	1.54	0.45
Equipment	0.10	0.11	0.07	0.02
Paving	0.08	0.19	0.21	0.20
Miscellaneous	0.09	0.02	0.08	0.20
Total	$12.23	$12.29	$12.55	$12.15

TABLE No. 12

UNIT COST OF SERVICE CONNECTION

	1939-40	1938-39	1937-38	1936-37	1935-36
Services Installed	3,653	2,995	1,916	2,082	1,548
Per cent ¾″	97.6	97.1	94.8	93.4	92.4
Labor	$4.74	$6.96	$6.60	$5.99	$7.10
Supervision	0.68	1.06	0.79	0.43	0.58
Material	2.68	4.64	3.12	3.97	4.64
Equipment	1.16	1.38	1.15	0.93	1.49
Miscellaneous	0.33	0.85	0.52	1.68	0.96
Paving	1.60	2.33	1.67	2.00	1.66
Total	$11.19	$17.22	$13.85	$15.00	$16.43

TABLE No. 13

PIPE RECORD FOR FISCAL YEAR

July 1, 1939 to June 30, 1940

	Wrought Iron and Steel Sizes	Total Pipe in Ground July 1, 1939	Pipe Laid 1939-40	Total	Taken out or Abandoned 1939-40	Total Pipe in Ground June 30, 1940
	½″	1,644′	0′	1,644′	1,644′	0′
	¾″	12,586	0	12,586	200	12,386
	1″	42,737	48	42,785	1,077	41,708
	1¼″	3,928	0	3,928	0	3,928
	1½″	172,384	314	172,698	1,462	171,236
	2″	306,035	798	306,833	2,611	304,222
Galv.	3″	28,024	0	28,024	0	28,024
G. & B.	4″	8,059	0	8,059	4,080	3,979
Galv.	5″	804	0	804	0	804
Dip.	6″	3,832	0	3,832	23	3,809
Galv.	6″	171	0	171	171	0
Galv.	8″	17	0	17	17	0
Galv.	12″	6,555	0	6,555	0	6,555
	13″	456	0	456	0	456
	16″	25,587	0	25,587	0	25,587
	20″	65,728	0	65,728	0	65,728
	22″	24,377	0	24,377	0	24,377
	23½″	9,087	0	9,087	0	9,087
	24″	26,443	0	26,443	0	26,443
	30″	26,953	0	26,953	0	26,953
	33″	2,409	0	2,409	0	2,409
	36″	40,800	0	40,800	0	40,800
	37½″	8,896	0	8,896	0	8,896
	44″	14,818	0	14,818	0	14,818
	48″	11,504	0	11,504	0	11,504
	60″	9,981	0	9,981	0	9,981
Totals............		853,815′	1,160′	854,975′	11,285′	843,690′

PIPE RECORD FOR FISCAL YEAR—Continued

July 1, 1939 to June 30, 1940

Cast Iron Pipe Sizes	Total Pipe in Ground July 1, 1939	Pipe Laid 1939-40	Total	Taken out or Abandoned 1939-40	Total Pipe in Ground June 30, 1940
2″	16,746′	2,756′	19,502′	50′	19,452′
3″	62,330	2	62,332	0	62,332
4″	482,481	3,703	486,184	348	485,836
6″	1,511,205	49,069	1,560,274	2,043	1,558,231
8″	1,335,406	17,130	1,352,536	*1,935	1,350,601
10″	6,873	0	6,873	0	6,873
12″	396,174	0	396,174	0	396,174
16″	241,282	0	241,282	0	241,282
20″	22,642	0	22,642	0	22,642
22″	19,058	0	19,058	0	19,058
24″	52,171	0	52,171	0	52,171
30″	6,138	0	6,138	0	6,138
Total	4,152,506′	72,660′	4,225,166′	4,376′	4,220,790′
Grand Total	5,006,321′	73,820′	5,080,141′	15,661′	5,064,480′
Total Miles	948.17	13.98	962.15	2.97	959.18

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*1820 feet abandoned from the old Municipal Water System classed in Inventory as Cast Iron Pipe but found to be Steel Pipe.

TABLE No. 13-A

VALVE RECORD

In the City Distribution Division, June 30, 1940

Gates		Service Gates		Stop Cocks		Blow-offs		Air Valves		Check Valves	
2″	72	3″	360	⅝″	18	¾″	9	¾″	30	1½″	7
3″	240	4″	295	¾″	135	1″	44	1″	9	2″	10
4″	1,041	6″	182	1″	193	1½″	286	1½″	283	3″	1
6″	3,157	8″	103	1½″	962	2″	792	2″	211	4″	7
8″	2,884	12″	3	2″	2,671	3″	185	3″	5	6″	20
10″	6					4″	202	4″	1	8″	23
12″	741					6″	143	6″	13	12″	3
16″	370					8″	89	8″	202	16″	3
20″	23					12″	22				
22″	20					16″	2				
24″	57										
30″	21										
36″	16										
37½″	2										
42″	1										
48″	1										

TABLE No. 14

CONTRACT DATA—1939-40

Contract No.	Title of Contract	Division	Contractor	Date of Award	Date of Completion	% Complete 6/30/40	Bid Price	Contract Cost to 6/30/40
192	Reconstruction of Calaveras Spillway	Alameda	Eaton & Smith	3/13/39	2/23/40	100%	$220,472.50	$215,411.81
197	Lay 6″ C. I. Mains in Melrose Ave. and Los Palmos Drive	City Dist.	E. J. Treacy	12/27/38	7/24/39	100%	1,361.90	1,252.60
208	Tile Interior of Pulgas Temple	Peninsula	American Art Tile Co.	10/ 9/39	12/ 4/39	100%	3,475.00	3,475.00
209	Lay 6″ and 8″ C. I. Mains in Delta and Day Sts.	City Dist.	W. J. Tobin	8/14/39	9/ 5/39	100%	5,871.55	5,572.54
210	Repaving Street and Sidewalk Openings for the Year 1939-40	City Dist.	Pacific Pavements Co., Ltd.	6/26/39	6/30/40	100%	33,490.00	26,676.32
211	Lay 6″ and 8″ C. I. Mains in Los Palmos, Burlwood and Melrose Avenues	City Dist.	W. J. Tobin	7/10/39	7/24/39	100%	1,503.60	1,502.94
212	Lay 6″ and 8″ C. I. Mains in 32nd, 34th, 35th Avenues and Moraga Street	City Dist.	W. J. Tobin	7/24/39	8/ 8/39	100%	5,082.00	4,314.53
213	Lay 6″ C. I. Main in Randolph Street	City Dist.	Martin Murphy	8/ 1/39	9/ 5/39	100%	1,895.35	1,762.15
214	Lay 6″ and 4″ C. I. Mains in Rodgers Street	City Dist.	E. J. Treacy	8/ 9/39	8/26/39	100%	1,032.60	929.94
215	Lay 6″ and 8″ C. I. Mains in 35th Avenue and Wawona Street	City Dist.	W. J. Tobin	7/24/39	8/14/39	100%	2,358.35	2,163.67
216	Slide Area Excavation and Cross-Connections near Sierra Point and Pulgas Pumps	Peninsula	Paris Bros.	10/23/39	4/ 8/40	100%	32,335.50	31,342.30
217	Lay 4″ and 8″ C. I. Mains in Modoc and Cayuga Avenues	City Dist.	E. J. Treacy	9/11/39	12/27/39	100%	983.00	961.66
218	Lay 4″ and 6″ C. I. Mains in Ottawa, Delano and Nahua Avenues	City Dist.	Martin Murphy	9/11/39	2/ 2/40	100%	1,859.65	2,038.54
219	Lay 6″ C. I. Main in Gorham Street	City Dist.	Martin Murphy	10/30/39	11/24/39	100%	1,017.65	1,060.64
220	Repairs to Penthouse, 425 Mason Street	General	Adam Arras & Son	9/25/39	11/18/39	100%	1,080.00	1,080.00
221	Install Tank, Pump and Mains at Hunters Point	City Dist.	Pacific Coast Construction Co.	9/25/39	11/27/39	100%	9,345.50	9,354.82
222	Gathering and Delivering Walnut Crop at Sunol	Agricultural	Travis M. Boone	9/12/39	11/10/39	100%	6,800.00	4,182.54
223	Lay 6″ and 8″ C. I. Mains for Potrero Housing Project	City Dist.	W. J. Tobin	1/30/40	5/17/40	100%	8,995.65	8,180.66
224	Lay 6″ and 8″ C. I. Mains in 39th Avenue and Moraga Street	City Dist.	E. J. Treacy	10/30/39	11/14/39	100%	2,696.70	2,409.86
225	Lay 6″ and 8″ C. I. Mains in Silliman Street and San Jose Avenue	City Dist.	E. J. Treacy	10/30/39	12/ 6/39	100%	1,992.50	2,021.56
226	Lay 6″ C. I. Main in Campbell and San Bruno Avenues	City Dist.	Martin Murphy	10/30/39	12/ 1/39	100%	1,185.50	1,262.89
227	Lay 6″ and 8″ C. I. Mains in 36th Avenue and Moraga	City Dist.	E. J. Treacy	10/16/39	11/ 3/39	100%	1,675.30	1,590.44

TABLE No. 14—Continued

Contract No.	Title of Contract	Division	Contractor	Date of Award	Date of Completion	% Complete 6/30/40	Bid Price	Contract Cost to 6/30/40
228	Lay 6″ and 8″ C. I. Mains in Vista Del Mar Subdivision	City Dist.	S. F. W. D.	11/27/39	12/22/39	100%	3,901.93	3,338.96
229	Lay 6″ C. I. Main in 19th Avenue — Taraval to Pacheco	City Dist.	E. J. Treacy	11/13/39	3/22/40	100%	8,657.65	7,791.57
230	Lay 6″ C. I. Main in 19th Avenue—Pacheco to Lawton	City Dist.	E. J. Treacy	11/13/39	1/15/40	100%	8,437.25	7,607.95
232	Lay 6″ and 8″ C. I. Mains in Glen View Garden Subdivision	City Dist.	E. J. Treacy	12/18/39	4/30/40	100%	5,021.96	5,105.50
233	Lay 6″ C. I. Main in 35th Avenue	City Dist.	W. J. Tobin	1/ 2/40	3/11/40	100%	2,019.38	1,987.16
234	Install Cross-Connection on Crystal Springs and Baden-Merced Pipe Lines at Baden	Peninsula	Paris Bros.	6/17/40	....	None	18,556.50	....
235	Lay 8″ C. I. Main in 36th Avenue and Quintara Street	City Dist.	Martin Murphy	2/19/40	4/ 1/40	100%	1,749.20	1,748.95
236	Lay 6″ C. I. Mains in Forest Hill Area	City Dist.	E. J. Treacy	2/13/40	3/18/40	100%	3,539.00	3,528.09
237	Lay 6″ and 8″ C. I. Mains in 30th and 31st Avenues and Pacheco Street	City Dist.	Martin Murphy	2/19/40	4/ 5/40	100%	3,346.80	3,255.90
238	Lay 6″ & 8″ C. I. Mains in 39th Avenue and Ulloa Street	City Dist.	W. J. Tobin	2/19/40	3/ 6/40	100%	1,950.35	1,937.47
239	Lay 6″ C. I. Main in 42nd Avenue	City Dist.	Martin Murphy	3/ 4/40	4/ 1/40	100%	1,251.45	1,148.88
240	Lay 8″ C. I. Main in the Embarcadero	City Dist.	S. F. W. D.	3/11/40	4/ 5/40	100%	1,599.50	1,613.33
241	Lay 6″ C. I. Main in Ledyard Street	City Dist.	W. J. Tobin	4/15/40	4/26/40	100%	991.05	1,045.62
242	Lay 4″ and 8″ C. I. Mains in Miraloma Park	City Dist.	W. J. Tobin	4/22/40	....	29%	2,148.45	....
243	Lay 6″ and 8″ C. I. Mains in 46th and 36th Avenues and Edward Street	City Dist.	W. J. Tobin	4/22/40	6/10/40	100%	4,130.05	3,891.73
244	Lay 6″ and 8″ C. I. Mains in 22nd and 23rd Avenues and Pacheco Street	City Dist.	Martin Murphy	4/29/40	6/ 4/40	100%	3,443.65	3,250.86
245	Lay 4″, 6″ and 8″ C. I. Mains in 19th, 42nd, 45th and Ocean Aves. and Moraga St. and Alemany Blvd.	City Dist.	Martin Murphy	4/29/40	6/19/40	100%	4,375.45	4,198.90
246	Lay 8″ C. I. Main in 37th Avenue	City Dist.	S. F. W. D.	6/ 3/40	....	None	1,750.25	....
247	Lay 4″ and 6″ C. I. Mains in Santa Fe, Topeka and Quint	City Dist.	S. F. W. D.	6/17/40	....	None	1,895.30	....
248	Lay 6″, 8″ and 16″ C. I. Mains in Merced Manor and Lakeside Highlands Subdivisions	City Dist.	W. J. Tobin	6/10/40	....	None	20,800.70	....
249	Lay 6″, 8″ and 12″ C. I. Mains in Lakeside Subdivision No. 3	City Dist.	E. J. Treacy	6/10/40	....	None	24,115.47	....
250	Repaving Street and Sidewalk Openings for the Year 1940-41	City Dist.	Pacific Pavements Co., Ltd.	6/17/40	....	None	33,580.00	....
251	Lay 6″ and 8″ C. I. Mains in Lakeside Subdivision No. 2	City Dist.	E. J. Treacy	6/24/40	....	None	4,521.40	....
252	Lay 6″ C. I. Main in Bayshore Boulevard	City Dist.	Fred T. Fairey	6/17/40	....	None	1,719.20	....

TABLE No. 15

Gross Metered Service Revenues, Service Charges and Special Service Revenues, Also Record of Refunds, Allowances, Adjustments, Collections and Balances Due. Comparisons—Fiscal Years 1936-37 to 1939-40.

Metered Service—Standard Rates	1936-37	1937-38	1938-39	1939-40
Residential	$2,809,315	$2,885,138	$3,007,368	$3,129,055
Commercial (Incl. Contrs.)	2,659,928	2,618,099	2,604,152	2,655,038
Industrial	437,155	406,740	367,876	389,189
Municipal	259,090	276.771	317,824	339,487
Docks	61,329	56,668	47,367	43,792
Suburban	325,094	344,225	415,250	449,177
Total	$6,551,911	$6,587,641	$6,759,837	$7,005,738
For Water Delivered	$5,414,263	$5,427,016	$5,575,836	$5,791,456
Ratio	82.7%	82.4%	82.5%	82.7%
Service Charges	1,137,648	1,160,625	1,184,001	1,214,282
Ratio	17.3%	17.6%	17.5%	17.3%
Special Service				
Fire Hydrants (S. F.)	$221,859	$223,972	$226,480	$229,263
Street Work and Sewers	306	291	339	253
Contractors—Flat Rates	2,360	1,825	1,785	2,791
Shipping—Hose Truck	33,466	32,087	32,988	27,266
Suburban—Special Contracts	39,746	31,496	21,559	20,753
Total	$297,737	$289,671	$283,151	$280,326
Total Gross Charges	$6,849,648	$6,877,312†	$7,042,988‡	$7,286,064
Deductions				
Cash Refunds	$1,061	$1,117	$1,746	$996
Allowances and Adjustments	21,673	18,217	17,702	16,209
Profit and Loss	4,855	3,418	4,476	3,673
Total	$27,589	$22,752	$23,924	$20,878
Net Sales	$6,822,059	$6,854,560†	$7,019,064‡	$7,265,186
Collections	6,398,425	6,436,241	6,484,877	6,702,967
Balances due on Cons. Accts.	473,418	455,798	517,016	581,558
Golden Gate Intnl. Exposition		$5,233*	$29,800*	$40,610

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†Affected by rate reductions of Jan. 1, 1937, and Jan. 1, 1938.

‡Affected by rate reduction of Jan. 1, 1938.

*Credited to Acct. 5702 Surplus (Reserve for Revaluation of Plant). The amount credited to "Reserve for Revaluation of Plant" together with the remaining balance in Acct. 5601—G. G. I. E.—will be used as a basis of revaluation of Plant Acct.

TABLE No. 15-A

CHARGES OF NON-PAYING MUNICIPAL ACCOUNTS

For the Fiscal Years 1938-1939 and 1939-1940

	1938-1939	1939-1940	Increase	Decrease
Hydrants	$226,480.10	$229,262.70	$2,782.60	......
Parks	112,605.09	106,538.75	......	$6,066.34
Golden Gate Park Proper	....	25,574.17	25,574.17	......
Municipal Railway	1,849.46	1,882.86	33.40	......
Municipal Railway Track Repair Work	43.68	1.43	......	42.25
Dept. of Public Works (Street Cleaning)	8,831.10	9,352.90	521.80	......
Troughs	176.98	188.83	11.85	......
Auxiliary Fire System	16,605.61	14,093.90	......	2,511.71
Dept. of Public Works (Public Buildings)	38,120.42	39,539.55	1,419.13	......
Dept. of Public Works (Street Work and Sewers)	339.14	252.69	......	86.45
Fire Department	6,909.13	6,947.84	38.71	......
Dept. of Public Health	28,443.44	29,927.89	1,484.45	......
Dept. of Public Health	1,054.27	1,011.43	......	42.84
Relief Home	14,597.80	14,804.80	207.00	......
Exposition Auditorium	1,033.90	1,133.42	99.52	......
Opera House and War Memorial Building	1,525.50	1,505.16	......	20.34
Opera House and War Memorial Building	618.02	655.23	37.21	......
Opera House and War Memorial Building (Sprinkler)	36.00	36.00	......	......
Purchaser of Supplies—City and County of San Francisco	16.98	19.31	2.33	......
Dept. of Electricity — General Alarm Station	338.00	177.56	......	160.44
Museums—				
Memorial Museum — Station M, Golden Gate Park—Fulton and 10th Avenue	75.08	63.49	......	11.59
Curator—Palace of Legion of Honor—Lincoln Park—Clement and 39th Avenue	294.68	315.14	20.46	......
Municipal Airport	1,439.99	1,536.97	96.98	......
Fire Boats	473.14	371.34	......	101.80
Hassler Health Farm	3,111.12	2,482.47	......	628.65
W. P. A. Projects	11,163.56	9,808.15	......	1,355.41
Public Welfare Dept.	169.71	547.94	378.23	......
Improvement Associations (56 accounts)	....	2,461.77*	2,461.77	.....
Totals	$476,351.90	$500,493.69	$35,169,61	$11,027.8

$24,141.79 Net Increas

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*Non-paying since October, 1939.

TABLE No. 15-B

CHARGES OF PAYING MUNICIPAL ACCOUNTS

For the Fiscal Years of 1938-1939 and 1939-1940

	1938-39	1939-40	Increase	Decrease
Libraries	$2,140.56	$2,017.65	......	$122.91
Playgrounds	24,286.13	24,748.82*	$462.69*	......
Schools	41,864.54	41,742.29	......	122.25
Totals	$68,291.23	$68,508.76*	$462.69*	$245.16
			$217.53 Net Increase	

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*Although charges were made and bills presented to the Playground Commission, none were paid during the fiscal year.

TABLE No. 16

METERS INSTALLED—SAN FRANCISCO DISTRICT

Revenue and Non-Revenue Producing as of June 30, 1940

Revenue Producing: Class of Consumers	⅝″	¾″	1″	1½″	2″	3″	4″	6″	8″	12″	Total
Commercial	20,802	948	1,708	1,866	2,357	15	26	161	114	1	27,998
Residential	92,063	127	629	222	14						93,055
Dock and Shipping	153	6	27	15	74	10				2	287
Total	113,018	1,081	2,364	2,103	2,445	25	26	161	114	3	121,340
Non-Revenue Producing:											
Commercial	1,198	27	33	23	71		2	3			1,357
Residential	1,209	1	2	2							1,214
Dock and Shipping					10						10
Total	2,407	28	35	25	81		2	3			2,581
Check Totals	115,425	1,109	2,399	2,128	2,526	25	28	164	114	3	123,921

NOTE: The above meter account includes 613 batteries composed of 1,680 meters.

The above meter account also includes 47 consolidations composed of 113 meters.

The above meter account also includes 276 automatic sprinklers for fire purposes.

Total number of active accounts as of June 30, 1940—120,261.

Previous Records

	1935-36	1936-37	1937-38	1938-39	1939-40
Total Meters	114,482	116,606	117,424	120,027	123,921
Increase	1,399*	2,124	818	2,603	3,894
Idle Meters	3,823	3,246	2,301	2,362	2,581

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*Decrease.

TABLE No. 16-A

METERS INSTALLED—SUBURBAN DISTRICT

Revenue and Non-Revenue Producing as of June 30, 1940

Revenue Producing: Class of Consumers	⅝″	¾″	1″	1½″	2″	3″	4″	6″	8″	10″	Total
Under Regular Rates	437	16	31	20	170		9	9		2	694
Under Special Contracts	5	2	1	2	15		1				26
Total	442	18	32	22	185		10	9		2	720
Non-Producing:											
Under Regular Rates	20	1	1	2	1		1	1	1		28
Under Special Contracts	4		2	2	18		1				27
Total	24	1	3	4	19		2	1	1		55
Totals	466	19	35	26	204		12	10	1	2	775

NOTE: The above account includes 207 meters in excess of accounts.
Total number of active Suburban accounts as of June 30, 1940, was 568.

Comparisons: Record June 30, 1936	⅝″	¾″	1″	1½″	2″	3″	4″	6″	8″	10″	Total
Revenue Producing	354	25	29	35	151	3	5	2			604
Non-Producing	31	4	4	2	26		1				68
Total	385	29	33	37	177	3	6	2			672
Record June 30, 1937											
Revenue Producing	389	24	35	32	165	3	4	2			654
Non-Producing	37	6	5	3	24		2		1		78
Total	426	30	40	35	189	3	6	2	1		732
Record June 30, 1938											
Revenue Producing	403	19	35	26	192	3	6	2			686
Non-Producing	37	5	2	4	15		2		1		66
Total	440	24	37	30	207	3	8	2	1		752
Record June 30, 1939											
Revenue Producing	428	20	32	22	196		11	9		2	720
Non-Producing	24	2	6	6	23		1		1		63
Total	452	22	38	28	219		12	9	1	2	783

TABLE No. 17

STREET MAIN TAPS AND SERVICE CONNECTIONS RECORD

San Francisco District—June 30, 1940

Taps on Street Mains

	Wharf	¾″	1″	1½″	2″	3″	4″	6″	8″	12″	Total
June 30, 1939......	244	131,363	3,227	2,833	2,030	596	262	218	111	3	140,887
Add 1939-40........	...	3,937	64	23	25	12	7	11	1	..	4,080
June 30, 1940......	244	135,300	3,291	2,856	2,055	608	269	229	112	3	144,967

SERVICE CONNECTIONS

Services connected to street mains, as above........................	144,967
ADD—"Distributors," being one or more add'l meters con. to serv. pipes	10,174
Total connections of record..	155,141
DEDUCT—Disconnected services	32,341
Net live services, all metered, 121,340—active; tempy. S/O 2,581, less 1,121 extra meters in batteries..........................	122,800

Previous Records	1936-37	1937-38	1938-39
Active	113,360	115,123	117,665
Shut-Off	3,246	2,301	2,362
Totals......................	116,606	117,424	120,027
Less extra battery meters........	961	977	1,033
Net	115,645	116,447	118,994

SERVICE INSTALLATIONS

Fiscal Year 1939-40

District	Taps	Distributors	Total
Richmond District	245	15	260
Sunset District	2,419	23	2,442
North Market and Western Addition...........	146	82	228
South Market and Twin Peaks	1,270	112	1,382
Totals................................	4,080	232	4,312
Previous Years			
1936-37	2,098	223	2,321
1937-38	2,086	194	2,280
1938-39	3,189	206	3,395

AUTOMATIC SPRINKLER INSTALLATIONS

October 26, 1932, to June 30, 1940

Size	1932-36	1936-37	1937-38	1938-39	1939-40	Total
4-inch	1	0	2	0	0	3
6-inch	29	6	8	6	5	54
8-inch	27	9	11	6	1	54
12-inch	0	2	0	0	0	2
Totals..................	57	17	21	12	6	113

TABLE No. 18

OFFICIAL METER TESTS

During Fiscal Year Ending June 30, 1940

Percentage of Variation

											Number	Tested
	0%	1%	2%	3%	4%	5%	6%	8%	10%	15%	Total	Ratio
Fast	..	16	15	3	1	..	..	..	..	..	35	32.0%
Slow	..	16	3	3	..	1	..	..	..	..	23	21.0%
O. K.	52	..	..	..	..	..	..	..	..	..	52	47.0%
Total	52	32	18	6	1	1	..	..	..	..	110	100.0%
Previous Totals:												
Year 1936	78	74	37	17	3	..	1	1	..	..	211	
Year 1937	45	85	28	12	3	..	..	..	..	..	173	
Year 1938	31	44	18	6	3	2	..	..	1	..	105	
Year 1939	38	53	12	10	1	..	..	..	..	..	114	

Refunds account of over-registration—$12.12 (1940).
Increased account of under-registration—$3.49 (1940).

TABLE No. 19

RECORD OF BAD WATER COMPLAINTS

Comparisons of complaints received during the Fiscal Years 1936-37 to 1939-40, with reference to the reservoirs supplying

	1936-37	1937-38	1938-39	1939-40
University Mound	182	240	116	152
College Hill	67	58	97	112
Lake Honda Reservoir	290	55*	87*	320*
Lake Honda Ocean View	..	66*	76*	85*
Lake Honda Lombard	..	27*	47*	21*
Forest Hill	7	2	6	12
Stanford Heights	62	89	45	89
Presidio Heights	32	54	23	50
Merced Manor	4†	..	..	1
Totals	644	591	497	842

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*Not segregated in prior records—all shown as Lake Honda.

†Includes only two months' period.

TABLE No. 20

RECORD OF NO WATER COMPLAINTS

Fiscal Years 1936-37 to 1939-40

	1936-37	1937-38	1938-39	1939-40
(a) Those for which the Department was responsible:				
Choked Pipes	80	115	71	62
Service or Main Broken	37	36	37	28
Service or Main Too Small	76	100	77	87
Elevation Too High	15	13	28	60
S/O at Main or Meter	65	57	36	48
District Tempy. S/D	22	14	5	8
Service or Meter Frozen	10	..	..	..
Totals	305	335	254	293
Percentage	32.3%	42.7%	33.3%	35.4%
(b) Those for which the Consumers were responsible:				
House Valves Closed	145	116	115	143
House Pipe Too Small	86	54	116	121
False Reports	181	166	176	193
Valves Out of Order	76	83	68	56
House Pipe Broken	24	14	18	10
Building Too High	0	0	2	1
Overloaded Service	17	17	13	11
Housepipe Frozen	111	..	..	..
Totals	640	450	508	535
Percentage	67.7%	57.3%	66.7%	64.6%
Total "No Water"	945	785	762	828

TABLE No. 21

RECORD OF BUILDING PERMITS

Issued by the Department of Public Works During the Fiscal Years 1936-37 to 1939-40

	1936-37	1937-38	1938-39	1939-40
Class "A"	$665,000	$40,000	$257,500	$214,700
Class "B"	1,974,375	649,600	741,900	445,700
Class "C"	1,339,529	1,247,450	1,405,136	4,399,108
Frames	9,523,668	8,087,721	11,954,395	14,339,254
Alterations	4,143,332	3,667,943	3,750,524	3,332,409
Public Buildings	206,110	1,289,639	3,563,446	2,221,187
U. S. Government	1,312,447	....	3,099,367	487,562
State Buildings	289,316	287,115	79,857	....
Golden Gate Bridge	....	....	....	....
1939 Exposition	3,290,323	1,644,575	2,490,041	....
Bay Bridge	14,633	2,283,377	....	....
Totals	$22,758,733	$19,197,420	$27,342,166	$25,439,920

TABLE No. 22

NUMBER OF BUILDING PERMITS

Issued by the Department of Public Works During the Fiscal Years 1936-37 to 1939-40

	1936-37	1937-38	1938-39	1939-40
Class "A"	9	1	4	4
Class "B"	20	12	14	8
Class "C"	111	89	99	94
Frames	2,068	1,760	2,730	3,518
Alterations	5,898	5,391	5,735	4,968
Public Buildings	13	15	24	14
U. S. Government	6	..	8	3
State Buildings	5	4	2	..
Golden Gate Bridge	..	..	..	..
1939 Exposition	8	19	46	..
Bay Bridge	1	1	..	..
Totals	8,139	7,292	8,662	8,609

TABLE No. 23

NUMBER OF CONTRACTORS' JOBS HANDLED BY THE BUILDERS' AND CONTRACTORS' SUPPLY SECTION

Totals during the Fiscal Years	1936-37	2,764
	1937-38	2,476
	1938-39	3,286
	1939-40	3,899

AGRICULTURAL DIVISION—RECEIPTS AND EXPENSES

RECEIPTS	1935-36	1936-37	1937-38	1938-39	1939-40
Rentals—Cash	$48,039.83	$39,760.69	$44,138.19	$45,064.32	$45,069.32
Rentals—Share Crop	8,639.97	9,426.48	6,080.96	4,711.78	3,005.68
Taxes—Paid by Tenants	974.30	1,817.15	2,514.22	1,089.26	1,061.29
Sale of Walnuts	26,862.23	27,385.40	24,534.52	33,909.74	13,730.46
Total	$84,516.33	$78,389.72	$77,267.89	$84,775.10	$62,866.75
EXPENSES					
General:					
Salaries	$10,390.80	$9,849.96	$10,975.77	$5,946.27	$5,524.43
Miscellaneous Office Supplies and Expenses	227.25	172.14	448.86	767.03	622.42
Automobile Service and Depreciation	865.65	1,007.00	1,117.07	725.11	692.77
Share Crops:					
Storage, Insurance, Handling, Freight	1,257.33	735.75	234.64	102.24	111.93
Care of Properties:					
Repairs—Buildings, Structures and Grounds	2,367.40	3,461.05	3,260.91	5,532.61	2,620.39
Walnut Orchard:					
Care of Orchard	6,901.20	5,443.37	5,674.78	3,399.88	8,105.07
Crop Harvest	6,054.09	5,676.18	5,469.13	9,051.16	5,068.67
Packing House and Selling Expense	4,639.24	4,332.49	3,459.61	5,010.89	1,850.59
Total Operating Expenses	$32,702.96	$30,677.94	$30,640.77	$30,535.19	$24,596.27
Net Income	$51,813.37	$47,711.78	$46,627.12	$54,239.91	$38,270.48
Additions and Betterments:					
Boundary Line Surveys	$3,006.67	....	....	....	....

ORGANIZATION AND PERSONNEL

N. A. ECKART	General Manager and Chief Engineer

WATER PRODUCTION AND ENGINEERING

T. W. Espy	Engineer of Water Production
I. E. Flaa	Hydraulic Engineer
C. A. Lauenstein	Assistant Hydraulic Engineer
J. H. Rankin	Superintendent Alameda Division
W. R. Anderson	Assistant Superintendent Alameda Division
G. J. Davis	Superintendent Peninsula Division
S. M. Millard	Assistant Superintendent Peninsula Division
G. E. Fanning	Photographer

CITY DISTRIBUTION

G. W. Pracy	Superintendent City Distribution
O. G. Goldman	Assistant Superintendent City Distribution
J. J. Miley	General Foreman City Pipe System
John E. O'Marie	General Foreman Services and Meters
Thomas Mayhew	Storekeeper
R. W. Tullis	Foreman Machine Shop

WATER PURIFICATION

G. E. Arnold	Chief Water Purification Engineer
H. L. Fruitman	Water Purification Engineer
E. W. Barbee	Water Purification Engineer
H. C. Medberry	Water Purification Engineer

WATER SALES

V. E. Perry	Manager Water Sales Division
A. M. Cooley	Assistant Manager Water Sales Division
W. D. Ryder	Supervisor Consumers' Accounts
J. E. Huntoon	Assistant Supervisor Consumers' Accounts
A. W. Till	Supervisor of Collections
F. S. Hobro	Assistant Supervisor of Collections
R. P. Scott	Chief Clerk
J. C. Joost	Supervisor Docks and Shipping
C. C. Young	Chief Meter Inspector
Joseph Conway	Consumers' Complaint Investigator

LANDS AND AGRICULTURE

A. S. Chesebrough	Superintendent Agricultural Division
F. Peters	Assistant Superintendent Agricultural Division

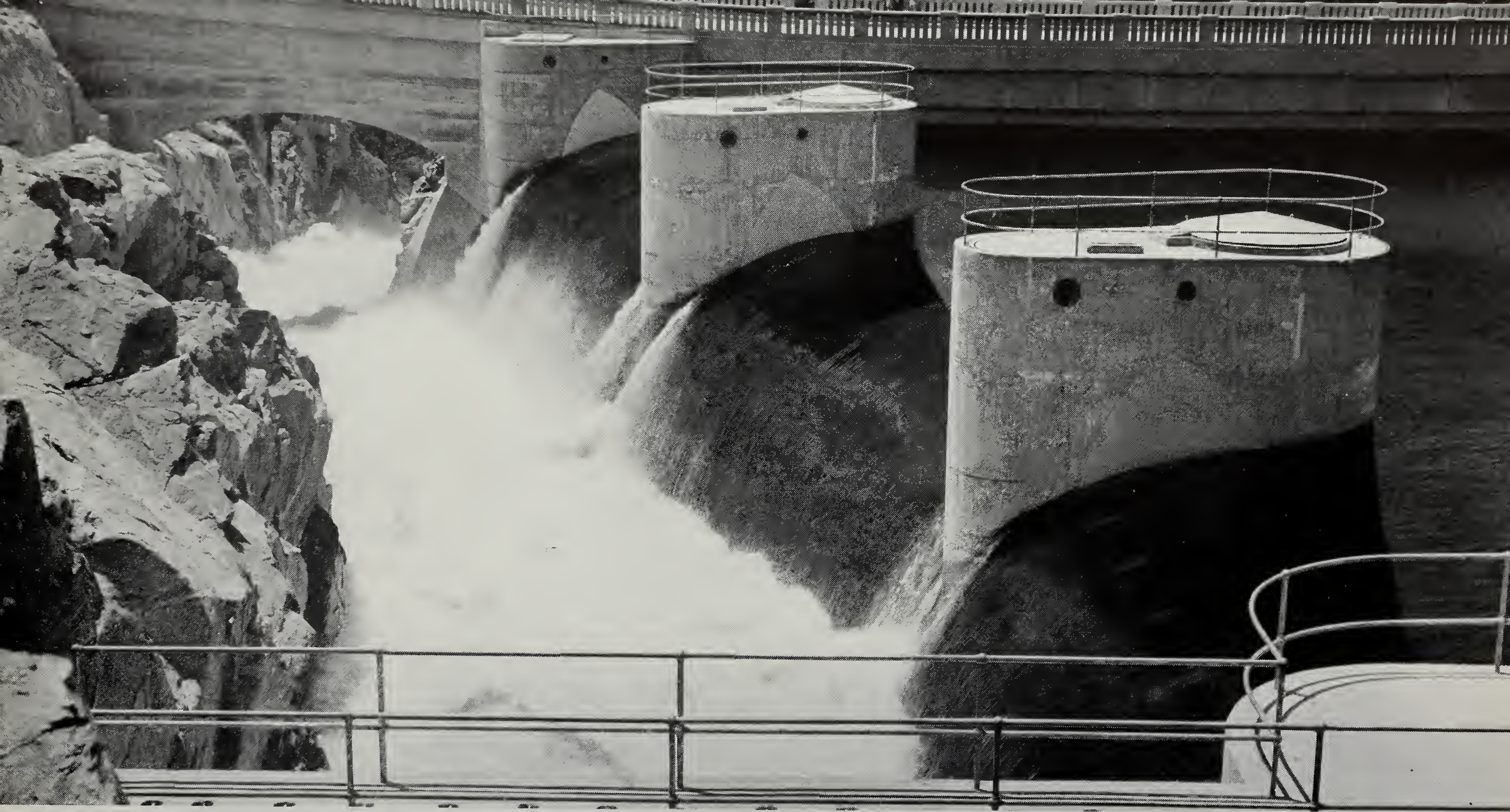
ACCOUNTS

J. J. Sharon	Auditor
E. J. White	Assistant Auditor
H. L. Patchner	Senior Bookkeeper
H. M. Kinsey	Cashier

RETIRED—1939-1940

During the past fiscal year the following employees were retired from service, and recognition is given on account of their faithful service in the organization:

Michael Griffin—Gateman	48 years' service
Joseph Ryan—Hoseman	44 years' service
Benjamin Posner—Shut Off Man	39½ years' service
Herbert W. Salter—Senior Clerk	31 1/3 years' service
James Maley—Laborer	27 years' service
Frederick M. Tibbey—General Clerk	22¾ years' service
Thomas Gordon—Engineer, Stationary Steam Engines	15 years' service
Olaf Hedblom—Laborer	14 years' service



O'SHAUGHNESSY DAM SPILLWAY
Over this structure flows excess water after the Hetch Hetchy reservoir has been filled to capacity. The spillway is so constructed that it may eventually be raised to increase the storage capacity in case of need.

HETCH HETCHY WATER SUPPLY, POWER AND UTILITIES ENGINEERING BUREAU

L. T. McAFEE

Manager and Chief Engineer

L. T. McAFEE
Chief Engineer and Manager Hetch Hetchy Water Supply

The Electric Power Bureau, with the exception of the Street and Building Lighting Division, was combined with the Hetch Hetchy Water Supply and the Bureau of Engineering to form a single organization called "Hetch Hetchy Water Supply, Power and Utilities Engineering Bureau." This new bureau is responsible for the following activities:

Hetch Hetchy Water Supply: Construction, operation and maintenance of water collection and transmission system, including facilities jointly used for water supply and power production;

Hetch Hetchy Power Operation: Construction, operation and maintenance of electric power production and transmission system;

Municipal Railway Engineering: Construction and extraordinary maintenance of street railway properties; observations and studies for mass transportation improvements;

Airport Engineering: Construction and extraordinary maintenance of San Francisco Airport, and planning for the use of Treasure Island as an airport on completion of the clearing away of temporary exposition structures:

General Engineering: Studies and reports for other projects of the Public Utilities Commission and projects of other departments as requested.

This change in organization was made after the death of Paul J. Ost, Manager and Chief Engineer, Electric Power Bureau.

Progress during the last fiscal year on each of the divisions above mentioned will be given herein under separate headings.

Organization and Personnel:

The bureau is in charge of L. T. McAfee, Manager and Chief Engineer. The principal members of the bureau staff are:

Headquarters engineering and administration, San Francisco office:

L. W. Stocker, Senior Civil Engineer,
L. M. Perrin, Electrical Engineer,
L. V. Degnan, Office Engineer,
M. J. Bartell, Assistant Hydraulic Engineer,
W. W. Helbush, Mechanical Engineer,
G. D. Burr, Structural Engineering Designer,
J. H. Turner, Civil Engineering Designer,
G. S. Warren, Senior Accountant.

Power production, and field operation and maintenance of the water production system, with headquarters at Moccasin:

Thornton Easler, Electrical Engineer,
Douglas Mirk, Chief Operator,
E. E. Rawles, Assistant Engineer.

Field engineering, and supervision of construction:

J. H. Ryan, Construction Engineer, headquarters at Hetch Hetchy,
A. J. Wehner, Construction Engineer, San Francisco Airport,
J. H. Harwood, Construction Engineer, Municipal Railway.

Other engineers, draftsmen, surveyors, accountants, clerks, stenographers, mechanics, laborers, etc., are employed, many of them permanently, others temporarily as needed for the work in hand.

Publicity and Visitors:

This bureau has collaborated with the Bureau of Public Relations in the preparation of literature and lectures on the Hetch Hetchy Water Supply and Power system and related work, and on activities in connection with the improvement of the Municipal Railway and the airports.

Many trips are made to the utilities under the direction of the bureau by outside engineers, by public bodies, and by visiting officials from other cities, states, and countries. These persons are always given every assistance, and when necessary are accompanied by one or more engineers from the bureau.

HETCH HETCHY WATER SUPPLY

Successful and uninterrupted operation of the Hetch Hetchy Water Supply properties continued through the fiscal year 1939-1940. Storage of water behind the enlarged O'Shaughnessy Dam provided for continuous full-scale operation of Moccasin Power Plant throughout the year. The quantity of water transmitted to San Francisco's local system from Hetch Hetchy sources increased. Maintenance work necessary to keep the properties in first-class operating condition was done, and several small contracts and other items of work for improvements and additions to the properties were performed.

The quantity of water supplied to San Francisco's local system from Hetch Hetchy sources was 14,918,300,000 gallons, making the total since the Hetch Hetchy Aqueduct was placed in operation (October 28, 1934), 60,102,900,000 gallons. The rate of delivery from July 1, 1939, to February 28, 1940, averaged bout 55,000,000 gallons daily, but was greatly reduced for the final four months f the fiscal year on account of the spring rains replenishing the local reservoirs.

Four cottages for housing employees were constructed at Early Intake. Improvements were made to the ventilating system in the galleries and to other perating features of the O'Shaughnessy Dam, and a spillway was constructed n the Lower Cherry Aqueduct. Reinforced concrete culverts were installed where he City's maintenance road along the San Joaquin pipe line crosses irrigation itches in the San Joaquin Valley. These jobs were all done under contracts. Plans and specifications were prepared for contract construction of other improvements.

Litigation pertaining to Hetch Hetchy water rights was successfully defended uring the year.

Hydrography:

Rainfall and stream flow for the season 1939-1940 were considerably above ormal. The Tuolumne River run-off at La Grange from October 1, 1939, to June 0, 1940, was 2,150,000 acre-feet, as compared to 960,000 acre-feet for the same eriod in the previous fiscal year. Hetch Hetchy Reservoir started spilling May 4, 1940. The recent enlargement of the reservoir by raising O'Shaughnessy Dam ermitted 70% more of this run-off to be stored for future use than was formerly ossible.

The City continued its collaboration in the snow survey work done under the irection of the State Department of Public Works, Division of Water Resources, n a cooperative basis, by governmental and private agencies interested in conservation of water and in flood control. The State issues four bulletins each year iving the results of the snow survey work done in each of the months of January o April inclusive, and in the two last bulletins of the series presents forecasts f the run-off for the period April to July inclusive. As the snow survey work mproves, these forecasts become increasingly accurate and important. It is of reat value especially in years of deficient rainfall to know, well in advance, pproximately the quantity of run-off to be expected in the Tuolumne basin, so hat the best possible arrangements can be made for conserving the water both or San Francisco's water supply and for use by the Irrigation Districts on their and.

The snow survey work may at some future time perform another highly important function. If a plan for flood control on the Tuolumne River is put into operation, it will be useful to have accurate forecasts in years of high run-off, so as est to plan flow regulations for the purpose of flood control in coordination with omestic water supply, irrigation, and power generation.

Below are given the amounts of run-off predicted for 1939 from snow survey ata, the amounts subsequently actually measured, and the predictions for 1940:

	1939 April to July, Incl. Acre-Feet Run-off		1940 April to July, Incl. Acre-Feet Run-off
	Predicted	Measured	Predicted
Tolumne River at Hetch Hetchy.....	300,000	310,000	685,000
Tuolumne River at La Grange.......	540,000	590,000	1,150,000

The precipitation for the season 1939-40, and the natural flow of the Tuolumne River for the fiscal year 1939-40, at the stations named below, were as follows:

PRECIPITATION IN INCHES

	Hetch Hetchy		Lake Eleanor		Moccasin	
Month	1939-40 Season	1910-40 Average	1939-40 Season	1910-40 Average	1939-40 Season	1925-40 Average
July	0.00	0.20	trace	0.12	0.00	0.01
August	0.07	0.12	trace	0.14	0.01	0.01
September	2.88	0.71	3.00	0.80	1.22	0.23
October	4.98	2.01	3.62	2.00	2.93	1.43
November	0.79	2.58	1.02	3.33	0.80	2.08
December	0.98	4.40	1.01	6.01	1.41	3.68
January	13.51	6.30	19.62	8.30	11.57	5.14
February	10.14	5.89	14.16	8.01	8.86	5.92
March	7.02	4.96	10.00	5.75	6.69	4.15
April	0.83	3.08	1.34	3.38	1.40	2.26
May	0.35	1.78	0.26	1.72	0.16	0.64
June	trace	0.81	0.05	0.73	trace	0.27
Total	41.55	32.84	54.08	40.29	35.05	25.82

NATURAL FLOW OF THE TUOLUMNE RIVER, IN ACRE-FEET

Fiscal Year 1939-1940

Month	Hetch Hetchy	Lake Eleanor	Cherry Creek	La Grange
July	11,449	182	664	17,344
August	6,994	0	230	7,484
September	6,581	498	2,582	16,834
October	20,057	5,044	11,431	44,943
November	5,915	758	2,223	16,616
December	3,437	1,941	4,770	20,248
January	39,677	24,825	26,959	226,489
February	33,610	17,272	16,756	250,000
March	61,315	34,691	36,432	344,707
April	101,447	34,207	47,038	324,917
May	310,891	48,972	115,448	571,098
June	225,366	20,328	68,057	347,620
Total	826,739	188,718	332,590	2,188,300

The amount of water diverted from the Tuolumne River for San Francisco during the fiscal year is shown in the following table:

1939	Million Gallons	1940	Million Gallons
July	2,131.1	January	1,871.2
August	2,089.5	February	1,628.9
September	2,012.8	March	929.5
October	1,785.2	April	448.1
November	460.6	May	30.0
December	1,406.5	June	124.9
			14,918.3
Diverted prior to July, 1939			45,184.6
Total diversion to San Francisco since beginning of operation of Hetch Hetchy Aquaduct			60,102.9

At the end of the fiscal year the total amount of water stored in Calaveras and Peninsula reservoirs and the City reservoirs of the Water Department was 54.8 billion gallons; in Hetch Hetchy and Lake Eleanor, 121.0 billion gallons. At the present rate of supply to consumers, plus allowance for evaporation, the grand total of storage, 175.8 billion gallons, would be sufficient to last seven years if no more water whatever flowed into the lakes during that time.

The City's defense against suits filed by various riparian owners has necessitated the systematic measurement and compilation of records of stream flow at several stations on the San Joaquin, Tuolumne, and Stanislaus Rivers in the lower San Joaquin Valley. Salinity tests of the San Joaquin River water are also made. The ground water elevation is observed at intervals of about a month in a series of 100 wells located in the vicinity of the stream channels. A record is kept of the amounts of water pumped from the rivers and used for irrigation by the various districts and individuals.

During the construction of the aqueduct tunnels many springs and wells adjacent to the tunnels suffered a diminution of flow and some even ceased to flow. Most of the property owners affected took the attitude that as the decrease or disappearance of flow occurred during the tunnel construction, it was because of the tunnel construction. Numerous claims for damages were made against the City, and some suits were brought. Anticipaitng such claims, the department many years ago adopted the practice of locating, by survey, all springs and wells that could be found in a zone through which a tunnel was to be driven, and measuring the flow or yield of each several times annually. The information thus accumulated has enabled the engineers to compare the conditions existing before, during, and after tunnel construction, and to study the relation of flow to rainfall and other weather conditions. From such studies, and from geological investigation, a determination of the merit of each damage claim is made. In some cases the City has accepted responsibility, but in most cases where diminution or disappearance of flow has actually occurred it is believed to be the result of natural conditions. Many of the claims were presented during the "dry cycle" when rainfall was below normal for several years. Recent winters of normal rainfall have brought many of these springs back to a flow as good as, and sometimes better than, when first observed. Pending adjudication, all records of flow are being kept up to date by continuance of the observations above mentioned.

Water Litigation:

As stated in the report of last year, the City is defendant in a number of lawsuits involving water rights. The status of the cases in the most advanced state is shown below:

Dan E. Williams, et al. vs. City and County of San Francisco: The oral arguments were heard in this case on March 4, 1940. On May 23, 1940, Judge Garibaldi filed his opinion, in which he said:

"Two main problems are presented to the Court in this action.

"1. Are the plaintiffs riparian owners of the lands described in the complaint?

"2. Have the plaintiffs shown any reasonable beneficial use to which they could put the water?

"As to the first question—it is the opinion of the Court that the fact that the titles of plaintiffs were annexed subsequent to the passage of the Desert Land Act of 1877 does not deprive them of their riparian rights. For this reason and by virtue of the further evidence introduced in this case, the Court finds the plaintiffs, and each of them, are riparian owners and entitled to riparian rights in the flow of the stream involved and to have their rights declared as such.

"As to the second question—after a careful review of the evidence, the Court has arrived at the conclusion that none of the proposed power projects suggested by the plaintiffs are feasible, practicable, or profitable. It is, therefore, the further opinion of the Court that said plaintiffs, and each of them, have failed, at the present time, to show that they can put the water to a beneficial use."

The findings of fact have not yet been filed.

John A. Bunting vs. City and County of San Francisco: This suit involves land damage due to diminution of surface water supply alleged to have been caused by the construction of the Coast Range Tunnel. Negotiations are now in progress which it is hoped will end in settlement out of court in a manner satisfactory to both plaintiff and defendant.

Turlock, Modesto and Waterford Irrigation Districts vs. City and County of San Francisco: On November 26, 1934, the directors of the Turlock Irrigation District and the Modesto Irrigation District met with the members of the Public Utilities Commission of the City and County of San Francisco, and agreed to appoint representatives to attempt to effect a settlement of this case out of court. Extensive hydrographic studies made by these representatives satisfied them that there is sufficient water available from the Tuolumne River watershed when properly conserved to meet the ultimate irrigation demands of the districts, as well as the City's estimated ultimate demand of 400 million gallons daily for domestic purposes. These studies also showed that full cooperation during past years by the districts and the City has resulted in the operation of storage releases from reservoirs so as to best meet the requirements of both the districts and the City. As a result of these studies, the districts and the City agreed to properly conserve the waters of the Tuolumne River, to continue to operate as in the past, with the same degree of cooperation, and to recognize the provisions of the Raker Act as applying to the districts and the City, without waiving any of their rights. The districts and the City also executed appropriate stipulations to postpone the trial of pending litigation for a period of 15 years.

Relations with United States Department of the Interior:

Pursuant to a requirement of the Raker Act, the annual payment of $30,000 was made to the United States, bringing the total of such payments on this account to $410,000 as of July 1, 1940.

The employees of the bureau have frequently conferred with the Superintendent and other officials of Yosemite National Park, on matters affecting the mutual interests of the City and the Park Service. Relations have been cordial, both parties cooperating to work out satisfactory solutions of the problems presented.

The relations with the Department of the Interior during the fiscal year in reference to the disposal of power under the Raker Act are described in the Hetch Hetchy Power Operation section of this report.

Flood Control Studies on the Tuolumne River:

As mentioned in the last previous report, the United States Engineer Office in Sacramento made studies and prepared a report on flood control on the Tuolumne River. No published action was taken by the Government in this connection during the fiscal year, although the bureau has continued in consultation with the United States Engineer Office on certain details in this connection.

Cherry River Development:

The activities of the United States Engineer Office on the Tuolumne River, and other conditions as to storage and use of water and the generation of power, focused attention on the advisability of making an early start on planning for the development of the Cherry River source of water supply.

An appropriation of $25,000 was made for surveys, studies, and the preparation of plans for the development of the Cherry River. Preliminary map studies and a field reconnaissance were made, with a view to sending a survey party into the field early in the next fiscal year to make the detail surveys necessary as a basis for planning the project.

Hetch Hetchy Railroad:

The Hetch Hetchy Railroad is not a common carrier, but is continuously maintained in proper condition for the purpose of transporting the City's materials and men over the project during severe winters when the roads are closed. The railroad was not used during the past winter because the light snowfall was not sufficient to interfere seriously with the use of automobiles and trucks.

During the year the railroad bed in Mile 41 was repaired where the tracks had settled due to poor drainage. The State of California Highway Maintenance Division moved one of its culverts away from the fill in this mile, and thus improved the drainage.

In addition to the usual routine maintenance work on the railroad, a crew was employed during the fiscal year replacing ties under the yard tracks at Moccasin, and reconstructing trestles at this location. Many posts and other members of the Moccasin penstock tramway trestle which had deteriorated were replaced this year.

Watersheds and Impounding Reservoirs:

The Hetch Hetchy Reservoir on the Tuolumne River and Lake Eleanor on Eleanor Creek (a tributary of Cherry River) impound water collected on the granite watersheds of the Sierra Nevada. The watershed area tributary to these reservoirs is 538 square miles, and the capacities of the reservoirs are respectively 117,300,000,000 gallons and 9,000,000 gallons. These reservoirs assure San Francisco a continuous supply of water for domestic and industrial uses, and provide water for generation of electric power. They also serve to some extent for flood control, thus benefiting riparian lands on the Tuolumne River and the San Joaquin River.

A reservoir keeper and an assistant are employed at O'Shaughnessy Dam, and operations at Lake Eleanor are in charge of a keeper, who lives at Eleanor Dam. These men are assisted at various times by maintenance crews in clearing the reservoir of logs, repairing roads, and in other maintenance work.

O'SHAUGHNESSY DAM
A downstream view of the huge dam with lower valves discharging water for transmission to San Francisco.

Two log booms were constructed in Hetch Hetchy Reservoir during the fiscal year; one to catch and hold logs and debris, and another across the spillway to prevent logs or boats from being drawn over the spillway. The log boom at Lake Eleanor was repaired this year by installing a complete set of new cedar logs.

Plans were prepared and bids received for furnishing steel ladders to give safe access to boats on Hetch Hetchy Reservoir. These ladders will be installed near the dam, on the canyon wall, in the winter of 1940 when the lake is at its lowest stage.

Quarters at O'Shaughnessy Camp:

During the fiscal year, minor improvements were made to buildings, roads, grounds, and parking areas in the vicinity of O'Shaughnessy Dam. These improvements were made, not only for utility purposes, but to create a more pleasing appearance for the numerous visitors to this point.

Quarters at Lake Eleanor:

Preliminary plans for the construction at Lake Eleanor Dam of a new cottage for the reservoir keeper and his family were made and submitted to National Park authorities for approval. Final plans and specifications will be made after receipt of approval, so that construction may commence in the spring of 1941.

O'Shaughnessy Dam:

The program mentioned in the last previous annual report for making periodical observations and measurements as a part of a comprehensive survey of stress conditions in O'Shaughnessy Dam was continued throughout the past fiscal year. These observations include strain gage readings, deflection measurements, and temperature measurements.

Contract No. 180, for furnishing and installing an eduction (CQ) system, a conduit aerating system, and a ventilating system, in the O'Shaughnessy Dam, was completed October 10, 1939, by Robert Hansen, contractor. The total payment under this contract was $4,575. The eduction system was installed to remove water at the downstream face of the dam, and thereby unwater and permit access to the drainage tunnel at elevation 3,500 and the lowest inspection galleries in the dam. The removal of this water also opens a passageway for the circulation of fresh air through the various galleries, thus assisting in the ventilation of the galleries. The eductor was installed on a by-pass connection on one of the lower three 36-inch outlet valves. It operates by using the by-pass outlet as a suction to take water from the pool just downstream from the dam, and discharges the water into the outlet tunnel, using the head of the reservoir water for power. It is not necessary that the lower galleries be accessible at all times, and the eductor is not operated except when an inspection is to be made. The aerating system was installed to reduce or eliminate the vacuum effect and reduce vibration in the conduit through which the 72-inch butterfly outlet valve in the 85-ft. addition to the dam discharges to the atmosphere. It consists of air inlets in the conduit line, fed through a ring manifold from two stacks leading nearly to the roof of the valve house. The ventilating system consists of blowers and pipes placed in the wells to eliminate the hazard resulting from the presence of stagnant air in the lower galleries and operating chambers of the dam. This was found necessary after the enlargement of the dam, because with the additional height, the circulation of fresh air was retarded, and had to be assisted by blowing in pure air into the bottom of the wells. The blowers are not kept in constant operation, but are started as often as necessary to keep the air from becoming stagnant and to permit safe access to the operating chambers at all times.

On November 1, 1939, work was started on a small concrete dam located about 700 feet downstream from the downstream face of O'Shaughnessy Dam. This small dam was built to prevent the water in the river from flowing back upstream into the drainage tunnel at elevation 3,500 when the above-mentioned eductor system is in operation. The dam is 3 ft. 6 in. wide by 6 ft. 6 in. high, and about 37 ft. long. The work was done by day labor and completed December 14, 1939.

During the fiscal year plans and specifications were prepared for Contract No. 185, furnishing and installing parapet lighting on O'Shaughnessy Dam. Work under this contract was postponed indefinitely.

Transbay Construction Company Litigation:

Transbay Construction Company, contractor for the enlargement of O'Shaughnessy Dam, under Hetch Hetchy Water Supply Contract No. 149, under date of October 9, 1938, filed a complaint against the City for additional payment under its contract because of damage alleged to have been suffered in the performance of its contract through the action of the City. Damages were claimed in the amount of $386,227.14; and under a second cause of action, an amount of $834,-

627.59 was claimed for labor and materials due, owing and unpaid by the defendant.

This case was tried in the District Court of the United States, Northern District of the State of California, Southern Division, during the period November 12, 1939, to November 22, 1939. Numerous exhibits were prepared for this case, and following consultations with the City Attorneys' office, employees connected with the work acted as witnesses during the trial.

Closing briefs were filed by the attorneys, and as of June 30, 1940, the court had not yet rendered a decision in the case.

Lower Cherry Aqueduct:

Although originally constructed as a temporary installation, the continued advantageous operation of Early Intake Power Plant justifies the numerous improvements that have been made from time to time in the Lower Cherry Aqueduct, which carries water diverted from the Cherry River to the power plant.

Under Contract 181, E. T. Lesure, contractor, a spillway was constructed in the Lower Cherry Aqueduct, at the downstream portal of Tunnel No. 2½. The total payment under this contract was $6,494.31, and the work was completed October 28, 1939. The construction consisted of a short outfall pipe line, 60 inches in diameter, the flow through which is controlled by a sluice gate in a stilling basin in the canal. At the downstream end of the stilling basin, a radial gate was installed. Both gates are manually operated. The purpose of this installation is to permit more convenient and more prompt regulation of the flow in the canal, in such a manner as primarily to prevent damage from water overflowing the canal banks. Before this spillway was built such regulation was only possible at the headgates, 1½ miles further upstream.

During the fiscal year, a leak in the canal between Tunnel No. 3 and Spillway No. E was repaired by patching the concrete lining at several points.

Surveys were made and plans and specifications were prepared for the construction of a sluiceway in the Lower Cherry Diversion Dam. This construction will provide for passing the stream load of sand and rock through the dam during periods of high water, and will also facilitate the removal of accumulations of sand behind the dam. This is necessary to prevent the accumulation of this material at the intake and in the aqueduct tunnels, and consequent interference with flow to the power house. Proposals for the work under these specifications will probably be invited in the spring of 1941.

As mentioned in the last previous report, plans and specifications were prepared for Contract No. 182 for constructing four 5-room cottages, with appurtenant facilities, at Early Intake Camp. Work under this contract was started September 9, 1939, and completed February 15, 1940, at the total price of $37,294.37. The cottages were constructed to replace obsolete dwellings occupied by operators of the Early Intake Power Plant. The houses replaced were built near the beginning of the construction period of the Hetch Hetchy Water Supply, of construction suitable for the then-intended occupancy of only a few years during the original dam and aqueduct construction period. The new cottages are constructed of Douglas fir framing with redwood siding and fire resistant roofs. The interior walls are plywood. The interior is pleasing in appearance, and properly equipped and decorated for satisfactory living conditions. The exterior finish harmonizes vith the location of the houses. The houses are equipped with all modern facilities or convenience and ease in housekeeping and for the comfort of the occupants.

Water supply and fire protection facilities, and a septic tank for sewage dis-osal were constructed to serve these houses. The old houses were removed, and sable material in them was salvaged.

In the fall of 1939, an old building at the Early Intake Camp was renovated nd made into a school house. As there were 5 children of school age in this camp, chool was started at that time. Tuolumne County established a special school nd appointed a teacher for these children.

Iain Aqueduct, Mountain Division:

This division, extending from Early Intake to Priest Reservoir, consists of a -mile tunnel and a 14-mile tunnel, connected by 225 feet of 9½-inch diameter teel pipe crossing the South Fork of the Tuolumne River.

During the 15 years since the Early Intake diversion dam was built, the deposit f silt, sand and gravel carried by the river in flood season and dropped in the elatively still water above the dam has steadily increased. Removal of a portion, t least, of this material will very soon be imperative, to avoid interference with he headgates and to prevent it from being carried into the aqueduct where it nay either be deposited forming an obstruction to flow of water to Moccasin ower house, or erode the concrete lining of the aqueduct causing reduction of low due to roughening of the surface and at the same time weakening the lining. he material removed will be useful for concrete work in this vicinity; concrete osts there now are extremely high because of the cost of bringing aggregates rom distant sources. A survey of the floor of the reservoir above the dam was nade and mapped during the year, to determine the extent of the deposit. Methods or the removal of the deposit are being studied.

Due to the mild winter of the past year, only a small amount of road mainte-ance was required in this division. However, this weather enabled road crews to nake many improvements in the City's private roads, which they had not been ble to do in previous years.

As a protection against forest fires, brush was cleared away from all structures, nd fire trails were cut in many locations in this division. A fire trail was cut round the Citys' property in Groveland.

Iain Aqueduct, Moccasin Division:

In this division, water is carried from Priest Reservoir, through the tunnel and enstocks to Moccasin Power House, and there discharged into Moccasin Re-egulating Reservoir.

During the fiscal year, 3 leaks in expansion joints in the Moccasin penstock ipes were repaired by re-packing the joints. The majority of the expansion joints n the penstock still have the original packing which was installed when the pen-tocks were constructed.

Fire trails were cut around the City's property at Priest, at the west portal of he power tunnel, and at Moccasin; and brush was cleared away from all struc-ures, piled and burned. Weeds were burned around Moccasin Reservoir, and the dam tender spent several weeks cutting grass and brush in the reservoir, and hauling this material above the high water line and burning it.

Repairs were made to the trestle carrying the Hetch Hetchy Railroad track over the penstocks.

The usual routine maintenance of buildings, roads, and other facilities in this division continued throughout the year. Buildings were painted, and improvements to gardens, and repairs and maintenance of water supply, electric supply, and other utilities, were made.

Accumulations of obsolete equipment and unusable materials in the warehouses and yards at Moccasin were disposed of by Sale No. 195, described in detail later in this report.

Main Aqueduct, Foothill Division:

The Foothill Division contains 15.85 miles of tunnel from Moccasin Re-regulating Reservoir to Oakdale Portal on the east slope of the San Joaquin Valley, with a pipe .45 mile long crossing the Tuolumne River Canyon and Don Pedro Reservoir at Red Mountain Bar. The usual maintenance work was done in this division. Roads were improved, and water supply lines to working points in this division were serviced and maintained in continuous operating condition. Surveys and the maintenance of records of the condition of springs and wells in this division continued, following the previously established procedure. This record, as mentioned elsewhere in this report, is being maintained in anticipation of or in connecton with claims by property owners adjacent to the aqueduct that the tunnel has drained or impaired the water supply on their property.

During the year, fire trails were cut around the City's property at Hetch Hetchy Junction, and at Red Mountain Bar. The usual routine maintenance was performed at Red Mountain Bar siphon. The electrically-operated mechanism of the Venturi meter used to measure the flow through the siphon was damaged by lightning, which necessitated its shipment to the manufacturer for repair. When returned, it will be reinstalled in a new location, and recalibrated.

Seepage of water at the west end of the Foothill Tunnel near Oakdale Portal was stopped by forcing cement grout behind the concrete lining. A structural steel frame was purchased and erected at the manifold at this portal, to handle the flanged bumped head covering the six-foot diameter outlet through which access is had to the tunnel for inspection and maintenance.

Roads were maintained and improved from Red Mountain Bar to Oakdale Portal.

Main Aqueduct, San Joaquin Division:

In this division the aqueduct consists of a pipe line averaging 5 feet in diameter and extending 47½ miles across the San Joaquin Valley from Oakdale Portal to Tesla Portal. The usual maintenance work in this division was done during the year. Valve houses and valve boxes were cleaned, exposed pipe was painted, valves were operated for test purposes and were serviced. Labor crews worked on the control of willow growth on the right of way near the San Joaquin River.

A road sufficient for patrol purposes was graded from the Oakdale meter house to the Hodis ranch, a distance of 9 miles west; and also, some improvements were made to the right of way road for a distance of 5 miles east of the San Joaquin River.

Under Contract No. 183, T. C. Tunsen, contractor, concrete culverts were constructed in the irrigated section of the San Joaquin Valley, at numerous points where the City's right of way road intersects the irrigation ditches. This work was completed April 14, 1940, at a cost of $7,101.29. These culverts facilitate inspection and maintenance of the San Joaquin Pipe Line, by providing a direct route of travel along the pipe line.

A leak in the main pipe line near Mile 91.90, 2 miles west of Vernalis, was repaired by electric welding while the line was in use for conveying water, and was under pressure. The leak was due to electrolysis. A ground connection was installed as a temporary expedient to retard the electrolytic action in this section of the pipe line, pending studies to be made in the near future as to permanent protection against this type of damage to the pipe line.

Main Aqueduct, Coast Range Division:

This division, which extends from Tesla Portal through the Coast Range to Irvington Portal, on the east shore of San Francisco Bay, consists of 28.52 miles of tunnel, with .59 mile of 69-inch diameter reinforced concrete pipe crossing Alameda Creek. Water from Calaveras Reservoir is brought into the Hetch Hetchy Aqueduct at the Alameda Creek crossing.

Routine maintenance work on the City's roads and structures in this division was performed during the year. Extremely heavy rains in this division caused numerous slides on the Mocho and Mitchell camp roads. The slide material was removed by City forces, using the tractor and bulldozer brought from the Foothill Division.

Surveys of the condition of springs and wells in this division were continued, maintaining the record begun years ago, before construction, for use in adjusting or combating claims by owners of property adjacent to the aqueduct on account of alleged damages to the water supply on their property due to the tunnel construction. The disposition of one lawsuit (the Bunting case) arising from such a claim is mentioned earlier in this report. Facilities were provided and maintained for furnishing water to certain property owners pending final disposal of their claims.

An inspection of the tunnel from Alameda Creek East Portal to Tesla Portal and return was made May 1 and May 2, 1940. The tunnel was found in excellent condition throughout. Such inspections are made periodically, so that if there should be any deterioration of the concrete lining of the tunnel and shafts or other defects in the structures, it may be detected at once and repaired while in the incipient stage.

An inventory and specifications for the sale of surplus equipment and materials at the Livermore headquarters yard, at several of the Coast Range tunnel construction camp sites, at Hetch Hetchy Junction, and at Moccasin, were prepared. The Purchaser of Supplies, under Sale No. 195, sold this equipment and material to Hyman-Michaels Co. and the United Commercial Company. The specifications provided that the buyer should remove everything offered for sale at these locations, and clear all buildings and grounds of all debris resulting from the storage of the material or from his operations at each of the locations. Because of this provision, the grounds and buildings at Livermore and Hetch Hetchy

SPHERICAL MANIFOLD

Here Hetch Hetchy water nears its destination as it emerges from the Coast Range tunnel at Irvington Portal.

Junction were satisfactorily cleared, so that the buildings used for construction purposes and not necessary for future use may be disposed of at an early date.

The total quantity of material disposed of under this sale, divided into the 3 classifications covered by the specifications, and the sale price for it, follows:

1,585.3465 tons scrap iron, steel ,etc., at \$7.03	\$11,144.98
9,442 lbs. brass and bronze, at 5c	472.10
1,701 lbs. copper, at 7½c	127.57
Total sale price	\$11,744.65

A headquarters establishment, comprising office, warehouse and yard, is being built on property purchased by the City at School Street and East Avenue in Livermore. The cottage and warehouse now on this property will be augmented by additional warehouses and office buildings in the future.

Main Aqueduct, Bay Crossing and Peninsula Divisions:

The Bay Crossing Division of the Hetch Hetchy Aqueduct extends from Irvington Portal 21.24 miles to Redwood Portal, the inlet to Pulgas Tunnel. The Peninsula Division includes the Pulgas Tunnel and the outfall canal discharging into Crystal Spring Reservoir—a total length of 1.89 miles.

Operation, maintenance, and other work in the Bay Crossing and Peninsula Divisions are under the jurisdiction of the San Francisco Water Department.

Financial Statements:

Financial statements relative to the construction, operation and maintenance of Hetch Hetchy Water Supply are given in this report at the end of the descriptive report of the Hetch Hetchy Water Supply, Power and Utilities Engineering Bureau.

Current contract data on Hetch Hetchy Water Supply contracts for the fiscal year 1939-1940 follow.

No. 180—Furnishing and installing eduction system, etc., for O'Shaughnessy Dam; Robert Hansen Contractor; date of start, July 27, 1939; time allowed, 90 days; completed, October 10, 1939; price bid, $4,500; total payment, $4,575; fund, 1932 bonds.

No. 181—Constructing a spillway in the Lower Cherry Aqueduct; E. T. Lesure, Contractor; date of start, September 13, 1939; time allowed, 90 days; completed, October 28, 1939; price bid, $6,488; total payment, $6,494.31; fund, 1932 bonds.

No. 182—Constructing cottages at Early Intake; S. C. Giles, Contractor; date of start, September 9, 1939; time allowed, 270 days; completed, February 15, 1940; price bid, $36,866; total payment, $37,294.37; fund, 1932 bonds.

No. 183—Constructing culverts in the San Joaquin Division of the Hetch Hetchy Aqueduct; T. C. Tunsen, Contractor; date of start, February 15, 1940; time allowed, 60 days; completed, April 14, 1940; price bid, $7,241; total payment, $7,101.29; fund, 1932 bonds.

No. 184—Constructing a sluiceway in the Lower Cherry Diversion Dam; specifications prepared.

No. 185—Parapet Lighting on O'Shaughnessy Dam; specifications prepared; work postponed.

HETCH HETCHY POWER OPERATION

The fiscal year 1939-1940 marks another year of successful operation of the power generating facilities of the Hetch Hetchy Water Supply system. Electric power distribution to San Francisco under the agency agreement with the Pacific Gas and Electric Company, which has been so profitable to the City, was the subject of litigation between the United States Government and the City, wherein the Government claimed violation of the Raker Act. Upon consideration of the City's financial status, the Department of the Interior permitted operation throughout the fiscal year of the power facilities, although the City was faced with a decision of the Supreme Court adverse to its disposal of power under the present arrangement.

Construction, maintenance and operation of features of the Hetch Hetchy Water Supply system used jointly for water supply and power purposes, although in a few instances mentioned briefly in this section of the report, are covered in detail hereinbefore under the heading "Hetch Hetchy Water Supply."

Water Conditions:

As stated in the last annual report, 50,000 acre-feet of water were dumped from Hetch Hetchy Reservoir in the spring of 1939 before the injunction obtained by Meridian, Ltd., was settled. Ordinarily, loss of this amount of water in a dry year would result in curtailment of power production. Fortunately there was more rain than usual during the fall and early winter following so that the inflow was sufficient to enable full production.

O'SHAUGHNESSY DAM COMPLETED

General view of the dam taken shortly after its height had been raised 85 feet to insure adequate water supply for future generations.

At the beginning of the fiscal year water was being drawn from storage. Lake Eleanor filled on January 28 and Hetch Hetchy Reservoir filled on May 25, 1940. Both were spilling at the end of the fiscal year. Storage on June 30 of the last two years was:

	Acre Feet	
	1939	1940
Hetch Hetchy Reservoir	297,545	341,218
Lake Eleanor	27,531	28,777
Priest Reservoir	678	543
	325,754	370,538
		(Increase 13.7%)

The past winter was unusual in that there was high precipitation with little snow below the 6,000 foot level. However, above 7,000 feet, the snow pack was excellent, insuring ample water for power generation during the next fiscal year. The mild winter reduced the amount of work clearing slides and the rotary snowplow was idle.

Early Intake Power House:

During the year bearings on two of the turbines were replaced. A leak in the Cherry Canal was repaired by patching the lining.

Under Contract No. 181 a new spillway was installed at the downstream end of Tunnel No. 2A of the Cherry Aqueduct.

Four new cottages for operators were built under Contract No. 182, replacing old houses not intended for permanent use. Another old building was renovated and made into a school house for the children of the community.

Moccasin Power House:

The Doble Engineering Company tested all high voltage bushings and two were found to be developing defects and were replaced. Similar tests were made two years before, when two other bushings were found subnormal and new ones substituted. These are all of the condenser type. None has completely failed in service but leaks developed, permitting gradual deterioration. The replacements have a better assembly, designed to prevent this trouble.

During the year the vibrating type voltage regulators were replaced with Westinghouse exciter rheostatic type regulators. The old ones required much attention and were mounted on slate panels which cracked excessively in the hot dry atmosphere. These difficulties are now eliminated.

During light load hours Moccasin Power House usually does the frequency governing for the Pacific Gas and Electric system. Due to the increased use of telechron clocks and of industrial processes dependent upon system frequency, governing requirements have become very exacting, so much so that operators are unable to make the corrections satisfactorily and still attend properly to all their other duties. Chief Operator Mirk has solved this problem by an automatic control application that reduces the amplitude of the ordinary frequency swings, leaving only small cumulative errors to be corrected manually.

Maintenance work during the year included overhaul of the Clubhouse oil-burning furnace, reservoir cleaning, tramway trestle repairs, re-packing penstock expansion joints, and extensive welding of turbine buckets.

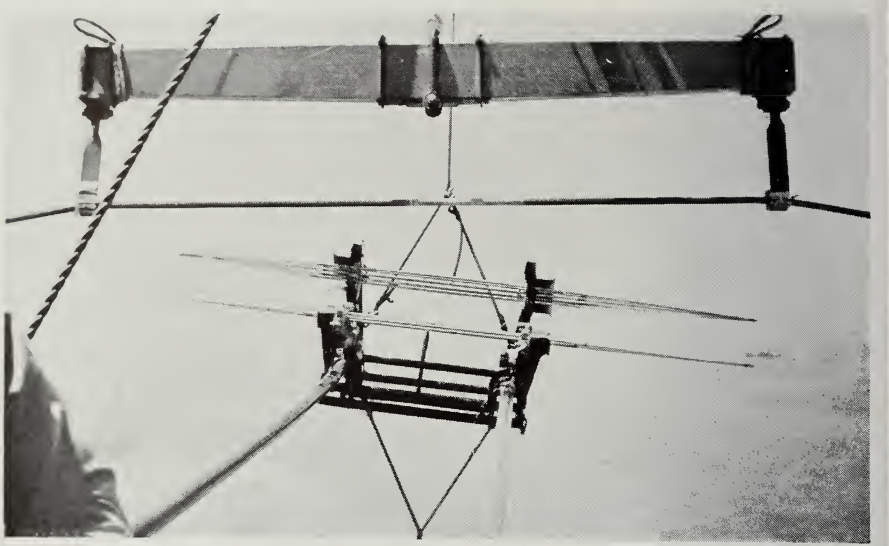
Transmission and Communication:

On the Moccasin-Newark lines the work of testing and replacing defective insulators was continued. The units in each string are tested by the drop of potential method and new strings are substituted for those having any sub-normal units, all without de-energizing the line. The insulators removed are afterwards tested separately and the satisfactory ones placed in stock. Replacements totaled 4,709 units during the year.

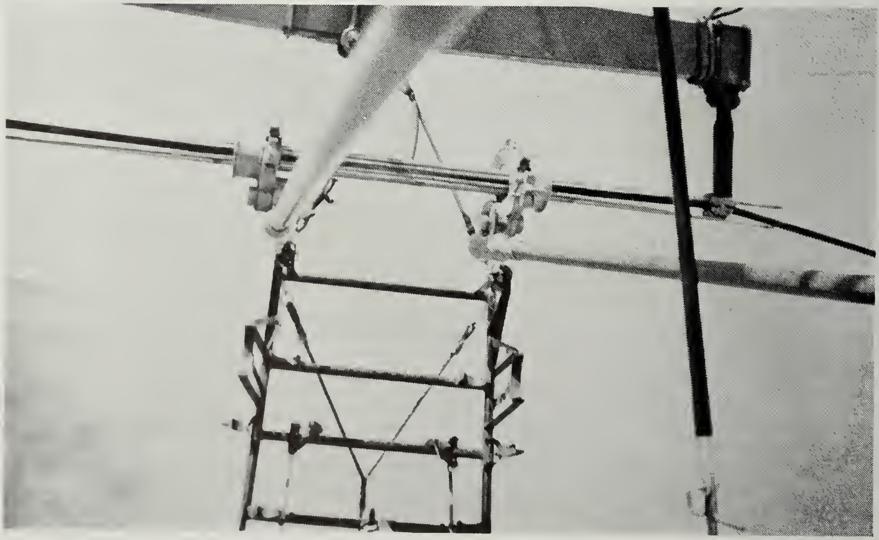
Flexing of the aluminum cable at supporting clamps on the Moccasin-Newark lines has broken some of the strands. Armor rods are now being installed to reduce the flexing and limit this trouble. As there were no satisfactory hot line tools for this purpose on the market, Foreman Crowley developed a set which enables the work to be done without taking the line out of service. The installation was started just before the close of the fiscal year.

On the 22,000-volt lines about 93 poles, 83 crossarms, and sundries were replaced.

INSTALLING ARMOR RODS ON TRANSMISSION LINE WHILE ENERGIZED

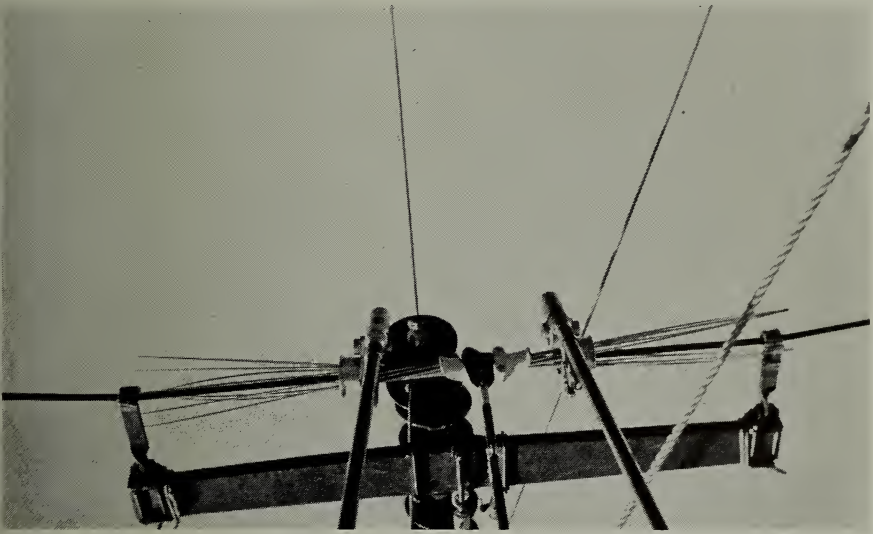


Cable hung in temporary cradle; armor rods in split dies below.

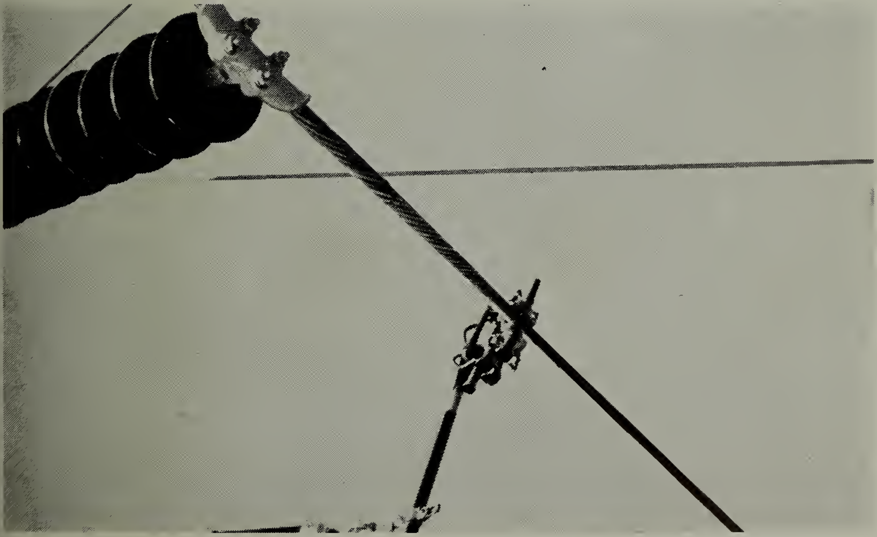


Dies with armor rods closed over cable.

INSTALLING ARMOR RODS ON TRANSMISSION LINE WHILE ENERGIZED



Suspension Clamp on cable and rods being twisted.



Twisting completed and cable rehung from insulator string.

The telephone lines required the replacement of 60 poles, 82 crossarms, over 6 miles of wire, and miscellaneous material.

Power Production:

The total amount generated was substantially the same as for the preceding year. Early Intake Power House output was somewhat reduced because of the wastage of water from Hetch Hetchy Reservoir already mentioned; this made it advisable to discharge from this power house into the main aqueduct tunnel to Moccasin more of the time than would otherwise have been necessary, in order to insure full output from the latter plant. When this is not necessary, Early Intake Power House discharges to the river instead, with greater generation from that station.

OUTPUT DATA

Generating Equipment:

Early Intake	3 hydro units, nameplate rating 1,000 kva. each
Moccasin	4 hydro units, nameplate rating 20,000 kva. each

Load:	Maximum kw.	Time		Load Factor
Early Intake	3,900	May 11, 1940	12- 1 p.m.	68.0%
Moccasin	82,000	July 5, 1939	11-12 m.	70.5%
Simultaneous	85,800	April 29, 1940	8- 9 a.m.	70.4%

Gross Generation:	1939-1940 kwh.	1938-1939 kwh.	% Change
Early Intake	23,225,600	27,122,600	—14.37
Moccasin	506,111,000	504,483,000	+ 0.32
Total Available	529,336,600	531,605,600	— 0.43
Disposition:			
Used at Power House	772,000	770,600	+ 0.18
Used on System	1,254,885	1,150,183	+ 9.10
Consigned to P. G. & E. Co.	493,888,800	495,388,800	— 0.30
Losses and unaccounted for	33,420,915	34,296,017	— 2.55
Total Energy	529,336,600	531,605,600	— 0.43

Power Disposal:

At the beginning of the fiscal year the City had an appeal before the United States Circuit Court of Appeals from an injunction granted by District Court Judge Roche, to restrain the City from delivering Hetch Hetchy electric energy to the Pacific Gas and Electric Company under the present contract. Stays of execution had been granted pending decision on the appeal. The court action had been brought against the City by the United States Department of Justice, at the instance of Secretary of the Interior Ickes, on the ground that Hetch Hetchy energy was actually being sold to the private company in violation of Section 6 of the Raker Act, and not being distributed by that utility as agent for the City in San Francisco.

Judge Curtis D. Wilbur, of the Court of Appeals, on September 13, 1939, reversed the decision of the lower court, finding that the City's contract with the Company constituted a true agency agreement, thereby lifting the injunction.

The Government appealed the case and on April 22, 1940, the United States Supreme Court affirmed the decision of the District Court and remanded the case back to it, Justice McReynolds alone dissenting.

The decision of the Supreme Court left the City facing an injunction against disposing of Hetch Hetchy energy under the present contract, effective as soon as the District Court received formal notification of the decision. With no other power market available, the City would lose a much needed annual revenue of about $2,400,000. Secretary Ickes was requested to cooperate in obtaining a continuance until the City could arrange power disposal plans acceptable to the Government. In connection with this he held meetings on May 21 and 23, 1940, with a delegation consisting of San Francisco citizens, City officials, and the two Congressmen from San Francisco. A letter from James Black, President of the Pacific Gas and Electric Company, to Mayor Rossi, proposing to lease to the City sufficient distribution facilities to dispose of the Hetch Hetchy power capacity, was submitted as indicative that the Company might be persuaded to arrange a lease of its entire San Francisco distribution property. A partial lease was considered impracticable and financially disadvantageous to the City. After much discussion, Secretary Ickes arranged for a continuance until August 1 with the stipulation that the City would in the meantime carry on negotiations for purchase and lease of the private system and also arrange for a special election by September 15, 1940, to authorize revenue bonds for the purchase.

Immediately upon his return, the Manager of Utilities began a series of conferences with President Black to negotiate terms by which the distribution system would be made available to the City. Every effort is being made to have a definite plan drawn up for submission to the Secretary of the Interior during the latter part of July. In case condemnation should become necessary, Plan Eight is being brought up to date for submission as Plan Nine.

In the last annual report it was stated that before the close of the fiscal year the Board of Supervisors requested the City's representatives in Congress to try to have the Raker Act amended by eliminating the restrictions on disposal of Hetch Hetchy energy. Pursuant to this request, Representative Welch introduced Bill No. H.R. 7036 on June 29, 1939. This would eliminate the words "or the electric energy" from Section 6, which now reads "that the grantee is prohibited from ever selling or letting to any corporation or individual, except a municipality or a municipal water district or irrigation district, the right to sell or sublet the water or the electric energy sold or given to it or him by the said grantee: Provided, that the rights hereby granted shall not be sold, assigned, or transferred to any private person, corporation or association, and in case of any attempt to so sell, assign, transfer, or convey, this grant shall revert to the Government of the United States." This bill was referred to the Public Lands Committee and has not yet been reported out. The Secretary of the Interior has publicly stated that he would fight this amendment. There seems to be no immediate prospect of passage of this bill. On five occasions power distribution propositions have been submitted to the voters in the last ten years and all failed to carry. It is hoped that a satisfactory solution to the problem will be reached without loss of revenue.

MUNICIPAL RAILWAY ENGINEERING

Increased street railway use, due to the holding of the Golden Gate International Exposition in 1939 and 1940, and to other causes, and the resulting increased revenue to the railroad utility, have necessitated and permitted many improvements in the system. New cars and buses were purchased, new trolley lines were constructed, and existing lines were reconstructed or replaced. The following is a report of the activities of the Hetch Hetchy Water Supply, Power and Utilities Engineering Bureau on improvements, construction and reconstruction of the Municipal Railway:

Howard Trolley Bus Line:

In the last annual report mention was made that an appropriation of $228,000 for a trolley bus line on Howard Street and Van Ness Avenue South was blocked by an injunction. This was the result of a taxpayer's suit by Mrs. Adolph Uhl, wife of Supervisor Uhl, on the ground that a portion of the appropriation was to be obtained from the depreciation fund. No appeal was made and on October 2 the Board of Supervisors passed a new appropriation for the same amount entirely out of operating surplus. The St. Louis Car Company confirmed its previous quotation for nine trolley buses and was given the contract.

An agreement was made with the Market Street Railway Company under which the Company turned over to the Commission its poles on Van Ness Avenue South and on Howard Street west of Steuart Street and agreed to furnish energy at cost plus ten per cent. The Commission is obligated to turn over to the Company rails in the amount of 226 tons, when taken up.

Plans and specifications were drawn up for the trolley installation. The Severin Electric Company was awarded Contract No. 186 in the amount of $36,868 to cover this work. Property was leased for a terminal loop on Van Ness Avenue South between 26th and Army Streets, and the Pacific Paving Company was given an informal contract for grading and paving the driveway. Bids were received for the construction of trolley bus storage and service facilities at the 17th Street carhouse which would utilize the unfinished upper level of the building.

In the meantime a new obstructionist suit has been filed in the name of Luther L. Putnam, contending that no surplus legally existed for the construction of this line until the depreciation reserve is fully funded in cash. On May 29, 1940, Judge Goodell of the Superior Court decided the case in favor of the City. The plaintiff's attorney appealed the case and the City Controller continued to hold up all funds for the project. The St. Louis Car Company offered to furnish the Controller a bond to protect him on payment of both their contract and that of the Severin Electric Company, which only resulted in a new injunction suit by the same party.

Litigation has delayed the operation of this trolley line more than a year. At the close of the fiscal year the trolley buses are awaiting clearance for shipment, the trolley contract is 86.3 per cent complete, the Pacific Paving contract is about 50 per cent complete, and the contract for storage and service facilities is awaiting clearance. The route has been without service since December when the street cars were taken off to permit the new trolley installation. After the money is released it will take about 4 months to complete the project.

Shops and Garage:

The increasing number of motor buses operated by the Municipal Railway has thrown a heavy burden on the shop and garage facilities. All major car repairs are made at the Geary Street carhouse as well as light repairs for cars stored there. Garage space is rented at Geary and Arguello Boulevards and also a small vacant lot opposite, both of which are inadequate. Preliminary designs were made for a combined carshops, service garage and bus storage yard, but funds were lacking to proceed further.

New Cars:

As mentioned in the last annual report, five cars were ordered in June, 1939, from the St. Louis Car Company. These are of the double-end type with rear entrance and front exit like the old cars. In all other respects the new cars are entirely different from the previous ones, embodying the latest improvements. Contributing to passenger comfort are seats with rubber foam cushions upholstered in velour, excellent illumination, and rubber truck springs and rubber wheel inserts which practically eliminate noise and vibration.

The doors are of the folding type, air operated, with suitable interlocks. Three cars have Clark trucks and two have Brill trucks.

Two of the cars have Westinghouse and three have General Electric equipment, designed to have substantially the same performance. Both acceleration and braking are controlled by one controller handle, the first application on surface cars. There are four 55-horsepower 300-volt motors per car, connected two in series. Acceleration is automatic and smooth, the rate of acceleration being governed by the controller position.

There are three kinds of service brakes operating in automatic sequence. The dynamic brake, using the motors as generators, comes into play first, giving way to the air brakes clasping the wheels at lower speeds. These are supplemented by magnetic track brakes when quicker stopping is desired.

Dimensional data is as follows:

Length	50′ 5″
Width	9′ 0″
Height	10′ 1″
Truck Centers	22′ 11″
Wheelbase	6′ 0″
Wheel Diameter	25″
Seating Capacity	60
Scale Weight	39,000 lbs.

The first cars to arrive were placed on display downtown during the first week of November, where they attracted great interest. After all had been received, in December, they were placed in service over one route after another so that the public might better become familiar with them. Before this could be done it was necessary to increase the radius of some of the vertical curves at changes of grade to provide clearance for the greater length of body.

During initial operation it was found that the ventilation was insufficient, both for the passengers and for cooling the control resistors. The air is exhausted from the body and discharged over the resistors by a blower rated at 1,200 cu. ft. per minute. Owing to obstructions and leaks in the air duct system the amount of ventilation was far short of this quantity. These defects were corrected at accessible points, the blower was speeded up, and air intakes were added at the expense of the manufacturer, and the ventilation is now satisfactory. The air system was laid out so that warm air from the resistors could be recirculated into the body in cold weather. Experience during the past winter demonstrated that this is unnecessary in the San Francisco climate and accordingly it was cut out permanently. Omission of this feature in future cars will decrease air duct resistance with consequent better ventilation.

These new cars are popular with the public and promote off-peak patronage. They are faster, but this advantage is largely lost when operating on the same routes with the old cars. The weight is about 12,000 less than that of the previous equipment, which, combined with much better springing, reduces the rail impact

TRACK RECONSTRUCTION

In reconstructing the tracks on lower Geary Street crews used the thermit welding process.

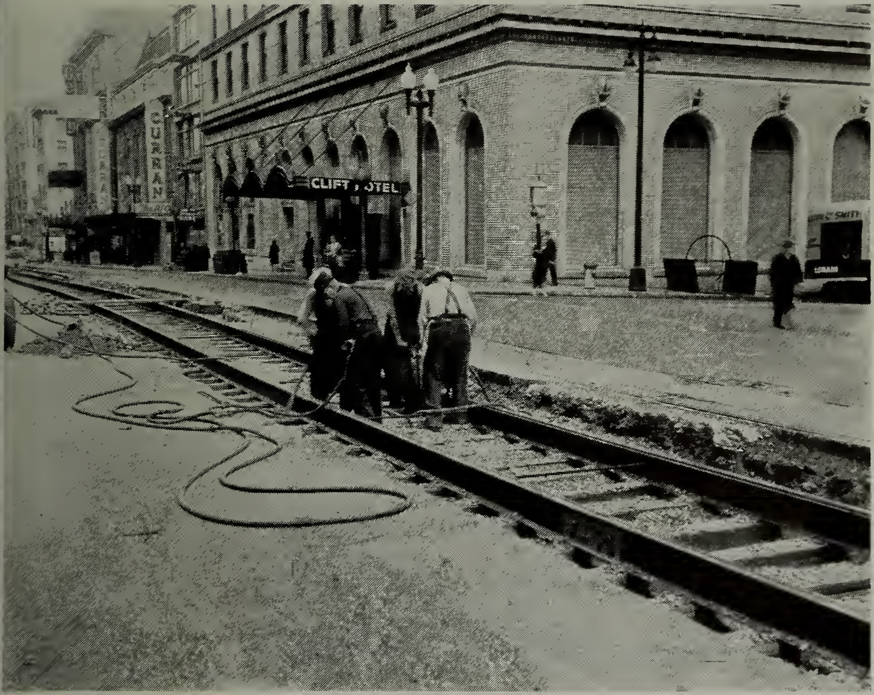
so track maintenance should be less expensive. Experience on other properties indicates that maintenance of the modern equipment costs about the same as for the older types.

In the interest of improved transportation an amount was set up in the proposed budget for 1940-41 for the purchase of about 12 more modern cars. This item, however, was deleted by the Board of Supervisors in passing upon the budget.

Mariposa Street Yard:

The principal new construction undertaken during the year was the enlargement of the storage yard at Mariposa and Bryant Streets. During the year the northerly half of the block of land on 17th Street between Bryant and York Streets was acquired by deed recorded August 31, 1939. Thereupon proceedings were taken to close York Street between 17th and Mariposa Streets. This was finally accomplished by Resolution 760 of the Board of Supervisors, approved January 17, 1940. This closed portion of York Street, with the adjoining property, gave the City a block of ground 400 ft. by 480 ft. on the east side of Bryant Street between Mariposa and 17th Streets.

On January 2, 1940, Municipal Railway Contract No. 185 was awarded to E. J. Treacy for grading and improving the additional property so acquired at the



TAMPING BALLAST
Another step in the reconstruction of Municipal Railway street car tracks on Geary Street

contract price of $18,618.20. This work was affected by the suit brought by Luther Putnam against the City in connection with the Howard Street Trolley Bus Line, referred to elsewhere in this report, and on April 26, 1940, the contractor was notified that in accordance with instructions from the Controller further payments could not be made on this contract. The contractor thereupon discontinued work and the project is still in an unfinished condition. The yard when completed will provide much-needed storage space for railway track material.

Reconstruction and Replacements:

The railway has now reached the age when many sections of track constructed during early days of the railway have become worn to such an extent that piecemeal maintenance is no longer economical and large sections must be reconstructed. Large scale reconstruction of such track is now in progress and will be continued in the future.

Contract 182, awarded in the last fiscal year, was completed July 28, 1939. Under this contract approximately 2 miles of single track in Twin Peaks Tunnel were reconstructed. The total contract payment for this work was $19,966.84.

On August 21, 1939, Contract No. 184, for reconstructing the tracks on Geary Street between Masonic and Jordan Avenues, was awarded to C. L. Harney. The work was completed on October 30, 1939, at a total contract cost of $41,608.02.

On March 11, 1940, Contract No. 176 was awarded to Eaton and Smith, for reconstructing the Geary Street tracks between Powell and Fillmore Streets. This comprised some of the oldest and most heavily traveled trackage on the Municipal system and the reconstruction was badly needed. The contract price was $125,699.90. The work will be completed early in the next fiscal year.

It is planned to provide storage and shop facilities for the Howard Street trolley buses on the second floor of the present 17th Street carbarn, which on original construction was left uncompleted, with future additions in mind. On November 16, 1939, bids were received under Contract No. 187 for the construction of these facilities, but were considered excessive and all bids were rejected. New bids under Contract No. 188, based on revised plans, were received on March 8, 1940, but the litigation elsewhere referred to in this report has prevented the award of the contract. The award was postponed from time to time and at the close of the fiscal year this contract was still open for award, pending the outcome of the litigation.

SAN FRANCISCO AIRPORT ENGINEERING

The preparation of plans and specifications and the supervision of construction work at San Francisco Airport were handled by the Hetch Hetchy Water Supply, Power and Utilities Engineering Bureau during the fiscal year 1939-1940. A considerable quantity of work was done in advancement of the program for improvement of the landplane and seaplane ports, with funds available from the 1938 bond issue, in the amount of $2,850,000, augmented by contributions from the Federal Government under a Works Progress Administration project. Under this program, the earth and rock fill over areas to be occupied by runways on the field extension was completed. Extended runway drainage and lighting work was done during the year on the existing field. The existing runways were lengthened, widened, and paved. Improvements in connection with the establishment of the Coast Guard Station were constructed, and many details in connection with the projected United Air Lines terminal facilities were handled.

TREASURE ISLAND AIRPORT

Following the close of the Golden Gate International Exposition on September 29, 1940, the work of demolishing and removing temporary structures constructed on Treasure Island solely for Exposition purposes will be undertaken, and on completion of that work Treasure Island will be improved as an airport. During the fiscal year, preliminary investigations, studies and reports were prepared, in advancement of the policy for the earliest possible conversion of Treasure Island into a terminal airport.

EXHIBIT A

HETCH HETCH WATER SUPPLY

PROPRIETARY BALANCE SHEET—JUNE 30, 1940

ASSETS

FIXED CAPITAL:			
In Service (Schedules Nos. 1, 1A and 1B)		$93,237,270.04	
Less Reserve for Depreciation (Schedules Nos. 1 and 1C)		6,403,890.85	$86,833,379.19
CASH:			
On Deposit with Treasurer:			
Operating Fund (Schedule No. 2)		$80,648.62	
Bond Funds (Schedule No. 2)		123,136.13	
Bond Interest Funds (Schedule No. 2)		891,676.25	
Bond Redemption Funds (Schedule No. 2)		1,011,000.00	
Land Purchases—H. H. W. S. Fund		1,302.50	
OTHER CASH:			
Revolving Fund		3,821.89	2,111,585.39
ACCOUNTS RECEIVABLE:			
Accounts Receivable (Miscellaneous)		$161.60	
Accounts Receivable (Uncollectible)	$18,524.46		
Less Reserve for Doubtful Accounts	18,524.46	0	161.60
INTERFUND ACCOUNTS—PUBLIC SERVICE ENTERPRISES:			
Hetch Hetchy Power Division (Schedule No. 3)		$14,465.11	
San Francisco Airport (Schedule No. 3)		8,731.35	
1932 Hetch Hetchy Bond Fund (H. H. W. S.)		284.42	23,480.88
INTERFUND ACCOUNTS—GENERAL CITY AND COUNTY:			
Public Utilities Commission (Schedule No. 4)			1,178.11
INVESTMENTS:			
Amazon and Glen Park Reservoir Sites			460,925.00
DEFERRED CHARGES:			
Material and Supplies—Corral Hollow Pipe Line		$273,850.00	
Prepaid Tesla Chlorinator Power Line	$4,008.08		
Less Reserve for Amortization of Tesla Power Line	1,003.33	3,004.75	
Prepaid Rent		15,000.00	
Work in Progress—Accounts Receivable and Interfund		675.19	
Work in Progress—Operation of Cookhouse, Early Intake		82.99	
Uncompleted Contracts, Purchase Orders and Other Commitments, H. H. W. S. (Contra)		4,676.77	
Uncompleted Contracts, Purchase Orders and Other Commitments, 1932 Bond Fund (Contra)		2,257.94	299,547.64
Total			$89,730,257.81

EXHIBIT A—Continued

PROPRIETARY BALANCE SHEET—JUNE 30, 1940

LIABILITIES

BONDED DEBT:		
Due July 1, 1940 (Schedule No. 2)	$1,600,000.00	
Due December 1, 1940, to July 1, 1977 (Schedule No. 2)	54,620,200.00	
Matured Bonds not present for payment (Schedule No. 2)	11,000.00	$56,231,200.00
BOND INTEREST PAYABLE:		
Due July 1, 1940 (Schedule No. 2)	$1,256,750.00	
Accrued—Not Due (Schedule No. 2)	34,868.11	
Matured Coupons not presented for payment	147,926.25	1,439,544.36
ACCOUNTS PAYABLE:		
General Creditors	$4,369.51	
Warrants Outstanding (Schedule No. 2)	28,806.68	33,176.19
INTERFUND ACCOUNTS—PUBLIC SERVICE ENTERPRISES:		
San Francisco Water Department (Schedule No. 3)	$11,271.31	
Hetch Hetchy Power Division (Schedule No. 3)	10,203.95	
Hetch Hetchy Water Supply (1932 Bond Fund) (Schedule No. 3)	284.42	21,759.68
INTERFUND ACCOUNTS—GENERAL CITY AND COUNTY:		
Employees' Retirement System (Schedule No. 4)	$1,438.57	
Public Utilities Commission (Schedule No. 4)	11,867.09	
General Fund (Schedule No. 4)	20,156.10	33,461.76
DEFERRED CREDITS:		
Reserve for Vacations	$3,897.09	
Reserve for Sick Leave	331.84	
Reserve for Compensation Insurance	747.28	
Reserve for Retirement System	4,752.15	
Rental due U. S. Government—Section 7 of Raker Act	30,000.00	
Reserve for Encumbrances of Work Not Yet Performed, San Francisco Water Department	4,676.77	
Contracts, Purchase Orders and Other Commitments, Hetch Hetchy Water Supply (Contra)	4,676.77	
Contracts, Purchase Orders and Other Commitments, 1932 Bond Fund (Contra)	2,257.94	51,339.84
Total Liabilities		$57,810,481.83

SURPLUS

Surplus (Exhibit C)	$31,919,775.98
Total	$89,730,257.81

EXHIBIT B

HETCH HETCH WATER SUPPLY

COMPARATIVE OPERATING STATEMENT

FISCAL YEARS ENDED JUNE 30, 1939, AND JUNE 30, 1940, AND PERIOD JULY 1, 1935 TO JUNE 30, 1940

	OPERATING EXPENSES	Fiscal Year Ended June 30, 1940	Fiscal Year Ended June 30, 1939	Period July 1, 1935, to June 30, 1940
PLANT OPERATING:				
6000	Salaries and Wages	$10,543.56	$6,748.32	$63,581.70
6010	Contributions to Retirement System	754.80	524.94	3,226.35
6020	Compensation Insurance	....	....	113.19
6030	Traveling	424.07	59.27	824.63
6050	Operating Supplies	1,053.59	689.83	5,351.63
6090	Miscellaneous	327.74	613.79	1,791.85
6096	Rent of Warehouse	90.00	90.00	270.00
	Total Plant Operating	$13,193.76	$8,726.15	$75,159.35
REPAIRS AND MAINTENANCE:				
7000	Buildings and Structures (Water)	$764.25	$3,060.13	$9,446.04
7002	Buildings and Structures (Joint)	3,744.59	4,957.58	16,333.50
7010	Reservoirs, Dams and Intakes	1,519.08	1,465.57	5,314.12
7015	Waterways	122.51	485.84	1,126.38
7020	Pipe Lines	5,000.40	7,015.36	24,450.92
7030	Miscellaneous Equipment (Joint)	1,278.32	1,284.64	7,999.55
7035	Aqueduct Tunnels	2,498.08	1,964.02	14,041.56
7040	Roads and Trails (Lake Eleanor to Moccasin)	5,958.14	7,229.79	31,488.48
7041	Roads and Trails (Moccasin to Tesla Portal)	1,219.55	1,187.80	4,624.00
7042	Roads and Trails (Tesla Portal to Irvington Portal)	1,526.15	1,013.40	6,020.98
7050	Automotive Transportation Equipment (Water)	1,546.99	*510.29*	817.65
7051	Automotive Transportation Equipment (Joint)	460.68	626.51	4,240.35
7090	Miscellaneous	786.71	1,770.97	9,118.36
7095	Hydrography	3,806.30	3,727.98	18,598.94
	Total Repairs and Maintenance	$30,231.75	$35,279.30	$153,620.83

Italic figures denote loss and deficiency.

EXHIBIT B—Continued

COMPARATIVE OPERATING STATEMENT

	ADMINISTRATIVE AND GENERAL:	Fiscal Year Ended June 30, 1940	Fiscal Year Ended June 30, 1939	Period July 1, 1935, to June 30, 1940
8000	Salaries and Wages	$29,480.08	$13,416.25	$78,943.39
8005	Contributions to Retirement System	978.23	523.44	2,893.41
8010	Services of Other Departments	6,425.22	12,103.59	37,707.85
8015	Professional Services	1,236.75	1,450.00	8,144.46
8020	Stationery, Office Supplies and Postage	209.06	377.45	1,818.29
8021	Sundry Office Expense	13.62	....	13.62
8025	Telephone and Telegraph	571.00	494.90	2,064.00
8030	Traveling	334.83	561.01	3,520.64
8035	Insurance	....	108.55	115.92
8040	Injuries and Damages	72.88	62.31	1,217.74
8041	Allowance for Sick Leave	....	....	500.00
8051	Automobile Insurance Premiums	780.50	471.79	2,923.29
8061	Water Rights and Damage Claims	26,877.81	30,756.58	81,639.28
8062	Legal Expense—Water Rights Litigation	200.00	420.41	3,133.79
8063	Legal Expense—Tuolumne River Claims	1,714.93	....	1,714.93
8095	Miscellaneous	4.00	.54	7.68
	Total Administrative and General	$68,898.91	$60,746.82	$226,358.29
	Total Operating Expenses	$112,324.42	$104,752.27	$455,138.47
	NON-OPERATING REVENUES			
5205	Rental Income, Miscellaneous	$2,509.70	$2,343.20	$12,665.57
5210	Interest Earned on Bank Deposits	....	....	26.61
5220	Interest Earned on Treasurer's Balances	....	....	5,332.75
5290	Miscellaneous	57.81	29.14	86.95
	Total Non-Operating Revenues	$2,567.51	$2,372.34	$18,111.88
	NON-OPERATING EXPENSES			
9000	Bond Interest	$2,608,792.18	$2,699,239.43	$13,435,779.38
9010	Rents	15,000.00	12,500.00	41,680.00
9020	Taxes (Actually Paid)	4,318.07	4,066.19	15,298.72
9030	Valuation of Properties	....	10,563.52	10,563.52
9050	Depreciation Expense	1,309,483.49	1,320,503.57	6,425,407.54
	Total Non-Operating Expenses	$3,937,593.74	$4,046,872.71	$19,928,729.16
	Net Non-Operating Expenses	$3,935,026.23	$4,044,500.37	$19,910,617.28
	Net Loss Transferred to Surplus	$4,047,350.65	$4,149,252.64	$20,365,755.75

EXHIBIT C

HETCH HETCH WATER SUPPLY

SURPLUS ACCOUNT

FOR THE TWELVE MONTHS ENDED JUNE 30, 1940

SURPLUS—June 30, 1939		$32,668,796.53
Adjustments made in Current Year Applicable to Prior Years Surplus		
ADD:		
Refund on Automobile Insurance Premium for Year 1938-39	$17.44	
Refund on Property Taxes Paid County of Stanislaus for Years 1937-38 and 1938-39	151.53	
Transfer of General Office Equipment from Hetch Hetchy Power Division	1,040.18	1,209.15
Adjusted Surplus as of June 30, 1939		$32,670,005.68
Changes in Surplus for the Current Year		
ADD:		
Contributions from San Francisco Water Department for Bond Interest and Redemption	$547,719.00	
Contributions from San Francisco Water Department for Buildings, Structures and Improvements and Reconstruction and Replacements	2,675.89	
Contributions from San Francisco Water Department for Operating Expenses 1939-40	131,314.75	
Contributions from Hetch Hetchy Power Division for Bond Interest and Redemption	1,644,249.14	
Contributions from Hetch Hetchy Power Division for Buildings, Structures and Improvements and Reconstruction and Replacements	2,025.53	
Contributions from General Fund for Bond Interest and Redemption	1,007,927.69	3,335,912.00
		$36,005,917.68
DEDUCT:		
Net Loss for twelve months ending June 30, 1940	$4,047,350.65	
Contributions to Hetch Hetchy Power Division from 1932 Bond Fund for Construction of Four Cottages at Early Intake	38,791.05	4,086,141.70
Surplus at June 30, 1940		$31,919,775.98

Composition of Surplus—June 30, 1940

ADDITIONS:		
Contributions from Taxes and General Fund	$31,117,660.33	
Contributions from Hetch Hetchy Power Division for Bond Interest and Redemption and Construction	18,787,878.52	
Contributions from Hetch Hetchy Power Division for Buildings, Structures and Improvements and Reconstruction and Replacements	12,666.45	
Contributions from San Francisco Water Department for Bond Interest and Redemption	2,335,819.00	
Contributions from San Francisco Water Department for Operating Expense	522,352.97	
Contributions from San Francisco Water Department for Buildings, Structures and Improvements and Reconstruction and Replacements	27,789.77	
Interest Received from Other Funds	77,801.23	
Bond Premium 1910-1932 Hetch Hetchy Bond Funds	1,240,169.26	
Bond Premium 1933 Hetch Hetchy Dam Bonds	137,438.55	
Grants earned on Federal Public Works Projects—Hetch Hetchy Dam and Moccasin Diversion Works	1,211,450.00	
Miscellaneous Additions to Surplus	323.34	$55,471,349.42
DEDUCTIONS:		
Net Loss, July 1, 1935, to June 30, 1940	$20,365,755.75	
Bond Discount, 1910, Hetch Hetchy Bonds	737,956.39	
Retirement of Corral Hollow Pipe Line	1,333,375.00	
Cost of Newark-San Lorenzo Pipe Line Transferred to San Francisco Water Department	1,063,840.76	
Contributions from 1932 Bond Fund to Hetch Hetchy Power Division for Construction of Four Cottages at Early Intake	38,791.05	
Miscellaneous Deductions from Surplus	11,854.49	23,551,573.44
Surplus at June 30, 1940		$31,919,775.98

EXHIBIT D

HETCH HETCHY WATER SUPPLY

COMPARISON OF ACTUAL REVENUES AND EXPENDITURES WITH BUDGET ESTIMATES

FISCAL YEAR 1939-1940

	Month of June, 1940			Twelve Months to June 30, 1940		
	Budget	Revenues Expenditures Accruals	Increase or Decrease	Budget	Revenues Expenditures Accruals	Increase or Decrease
PRODUCTION EXPENSES						
Plant Operations	$1,084.08	$1,421.40	*$337.32*	$13,009.00	$13,193.76	*$184.76*
Repairs and Maintenance	2,718.08	3,905.45	*1,187.37*	32,617.00	30,231.75	2,385.25
Administrative and General	6,498.17	5,235.73	1,262.44	77,978.00	68,898.91	9,079.09
Total Operating Expense, exclusive of Depreciation	$10,300.33	$10,562.58	*$262.25*	$123,604.00	$112,324.42	$11,279.58
FIXED CHARGES						
Interest on Long Term Debt	$217,525.50	$215,782.38	$1,743.12	$2,610,306.00	$2,608,792.18	$1,513.82
Fee to U. S. Government (Raker Act)	1,250.00	1,250.00	0	15,000.00	15,000.00	0
Taxes	360.67	369.66	*8.99*	4,328.00	4,318.07	9.93
Total Fixed Charges	$219,136.17	$217,402.04	$1,734.13	$2,629,634.00	$2,628,110.25	$1,523.75
Bond Redemption	$163,908.33	$163,908.33	0	$1,966,900.00	$1,966,900.00	0
Equipment	0	467.62	*467.62*	0	467.62	*467.62*
Current Reconstruction and Replacement	206.17	0	206.17	2,474.00	2,208.27	265.73
Total Hetch Hetchy Water Supply Budget 1939-40	$393,551.00	$392,340.57	$1,210.43	$4,722,612.00	$4,710,010.56	$12,601.44
Receipts by Transfer:						
Water Revenue Fund	$57,775.42	$57,775.42	0	$693,305.00	$693,305.00	0
Hetch Hetchy Power Operative Fund	137,005.75	137,005.75	0	1,644,069.00	1,644,069.00	0
General Fund	82,870.33	82,870.33	0	994,444.00	994,444.00	0
1928 Bond Interest and Redemption Fund Surplus	93,875.00	93,875.00	0	1,126,500.00	1,126,500.00	0
1932 Hetch Hetchy Bond Fund Surplus	590.17	590.17	0	7,082.00	7,082.00	0
1933 Hetch Hetchy Dam Bond Fund Surplus	21,434.33	21,434.33	0	257,212.00	257,212.00	0
Total Receipts	$393,551.00	$393,551.00	0	$4,722,612.00	$4,722,612.00	0
Net Savings Over Budget Estimate			$1,210.43			$12,601.44

Italic figures denote loss and deficiency.

SCHEDULE No. 1

HETCH HETCHY WATER SUPPLY

1000 FIXED CAPITAL IN SERVICE

June 30, 1940

Account Number			Balance June 30, 1939	Gross Additions	Retirements	Adjustments	Balance June 30, 1940	Accrued Depreciation
1010-C2		Franchises and Water Rights	$2,735,630.00				$2,735,630.00	0
1015-C5		Landed Capital:						
	A	Source of Water Supply Land	$172,163.00				$172,163.00	
	D	Right of Way Land	611,808.14	$2,356.91			614,165.05	
	E	General Office and Other Lands	68,928.00				68,928.00	
	F	Roads, Trails and Tramways (including Hetch Hetchy Railroad)	919,148.99	557.56			919,706.55	$142,725.36
			$1,772,048.13	$2,914.47			$1,774,962.60	$142,725.36
1020-C6		Buildings, Structures and Grounds:						
	A	Source of Water Supply Buildings and Fixtures	$141,272.21	$384.37			$141,656.58	$24,067.51
	B	Pumping Stations, Buildings and Fixtures	11,014.00				11,014.00	1,376.70
	C	Purification Buildings and Fixtures	28,210.00				28,210.00	1,515.40
	D	General Office and Other Buildings and Fixtures	14,571.00				14,571.00	14,571.00
			$195,067.21	$384.37			$195,451.58	$41,530.61
1025-C7		Impounding Dams and Reservoirs	$16,320,573.93	$11,245.76	$1,349.48		$16,330,470.21	$766,291.06
1025-C8		Lake and River Cribs	747,161.00				747,161.00	38,946.14
1025-C13		Canals and Conduits	71,107,139.03	15,080.86	2,589.38	$109,687.67	71,229,318.18	5,356,215.97
			$88,174,873.96	$26,326.62	$3,938.86	$109,687.67	$88,306,949.39	$6,161,453.17
1030-C14		Pumping Equipment	$24,521.00				$24,521.00	$6,130.10
1035-C16		Purification Capital	$37,207.00				$37,207.00	$4,447.72
1045-C24		General Equipment:						
	A	General Office Equipment	$4,499.01	$1,161.66		$20,422.63	$26,083.30	$16,811.95
	D	General Stable and Garage Equipment	25,506.96	3,041.29	$3,231.00		25,317.25	14,033.67
	E	General Construction Equipment	30,679.85	935.24	1,395.92		30,219.17	14,447.80
	F	Railroad Rolling Stock	14,804.00				14,804.00	7,372.16
	G	Communication System	43,690.00				43,690.00	9,495.08
	H	Other Equipment	4,952.50	203.09			5,155.59	418.28
			$124,132.32	$5,341.28	$4,626.92	$20,422.63	$145,269.31	$62,578.94
1049-C24J		General Capital Unclassified	$51,154.81		$1,655.47	*$20,422.63*	$29,076.71	*$14,975.05*
1050-C25		Undistributed Construction Expenditures:						
	A	Engineering and Superintendence	$988.16	$601.29			$1,589.45	
	E	Miscellaneous Construction Expenditures	122,444.50		$12,756.83	*$109,687.67*	0	
	F	Undistributed Construction Expenditures	*13,387.00*				*13,387.00*	
			$110,045.66	$601.29	$12,756.83		*$11,797.55*	
			$93,224,680.09	$35,568.03	$22,978.08	0	$93,237,270.04	$6,403,890.85
		Schedule		No. 1A	No. 1B			No. 1C

Italic figures denote loss and deficiency.

SCHEDULE No. 1A

HETCH HETCHY WATER SUPPLY

GROSS ADDITIONS

June 30, 1940

1015-C5D	LANDED CAPITAL—RIGHT OF WAY		
	Deepening Escobar Ranch Spring	$168.68	
	Legal Expense, Land Damage Claims	2,188.23	$2,356.91
1015-C5F	LANDED CAPITAL—ROADS, TRAILS AND TRAMWAYS		
	Partial Replacement of Ties in Hetch Hetchy Railroad		557.56
1020-C6A	BUILDINGS, STRUCTURES AND GROUNDS—SOURCE OF WATER SUPPLY BUILDINGS		
	Replace Gauging Station on Middle Fork of Tuolumne River		384.37
1025-C7	IMPOUNDING DAMS AND RESERVOIRS		
	Legal Expense in Connection with Enlargement of O'Shaughnessy Dam	$533.17	
	Construction of Ventilating System, O'Shaughnessy Dam	4,596.29	
	Construction of Cemented Rubble Walls in Bed of Tuolumne River	947.14	
	Replace Log Boom on Lake Eleanor	653.54	
	Litigation Expense in Connection with Contract for Enlargement of O'Shaughnessy Dam (Transbay Construction Co. Suit)	3,596.71	
	Construct Log Boom on Hetch Hetchy Reservoir	918.91	11,245.76
1025-C13	CANALS AND CONDUITS		
	Construct Spillway, West Portal, Lower Cherry Tunnel No. 2½	$7,514.10	
	Construct Structural Steel Frame for Handling Bumped Head at Oakdale Portal	413.71	
	Construction of Culverts, San Joaquin Pipeline	7,113.97	
	Hospitalization, Coast Range Division	39.08	15,080.86
1045-C24A	GENERAL OFFICE EQUIPMENT		
	Miscellaneous Office Equipment Transferred from Hetch Hetchy Power Division (per detail list in Property Valuation Ledger)	$1,161.66	
1045-C24D	GENERAL STABLE AND GARAGE EQUIPMENT		
	One Ford V8, ½ ton Pickup, 1940, Motor No. 18-5354090, Hetch Hetchy Water Supply No. 11A	$684.95	
	One Chevrolet Carry-All, 1940, Motor No. K3143073, Hetch Hetchy Water Supply No. 4A	851.30	
	One Ford V8 Sedan, 1940, Motor No. 18-5355002, Hetch Hetchy Water Supply No. 209A	795.23	
	One Ford V8 Pickup, Closed Cab Model, 1940, Motor No. 18-5652793, Hetch Hetchy Water Supply No. 208A	709.81	3,041.29
1045-C24E	GENERAL CONSTRUCTION EQUIPMENT		
	One 6-inch Sterling Model 90M Gas Engine Driven Self Priming Pump		935.24
1045-C24H	OTHER EQUIPMENT		
	Furnishings for Guest House No. 2 at O'Shaughnessy Dam		203.09
1050-C25A	ENGINEERING AND SUPERINTENDENCE		
	Complete Records Concerning the Hetch Hetchy Project, Engineering Data, etc.		601.29
	Total Gross Additions		$35,568.03

SCHEDULE No. 1B

HETCH HETCHY WATER SUPPLY

RETIREMENTS

June 30, 1940

1025-C7	IMPOUNDING DAMS AND RESERVOIRS		
	Legal Expense in Connection with Enlargement of O'Shaughnessy Dam (A. E. Chandler Bill)	$568.48	
	One 100-cell Battery Unit at O'Shaughnessy Dam	781.00	$1,349.48
1025-C13	CANALS AND CONDUITS		
	Repair, Sale and Handling of Surplus Construction Equipment	$2,439.38	
	Remove Wire and Hangers from Six Coast Range Shafts	150.00	2,589.38
1045-C24D	GENERAL STABLE AND GARAGE EQUIPMENT		
	On Ford Touring Car, Motor 20484, Hetch Hetchy Water Supply No. 160	$50.00	
	One Ford V8 ½-ton Pickup, Motor No. 18-3742155, Hetch Hetchy Water Supply No. 11	685.00	
	One Chevrolet Carry-All Truck, Motor No. K-5630580, Hetch Hetchy Water Supply No. 4	874.00	
	One Ford Sedan, Motor No. 18-1686700, Hetch Hetchy Water Supply No. 209	749.00	
	One Ford ½-ton Pickup, Motor No. 1240428, Hetch Hetchy Water Supply No. 208	623.00	
	One Ford ½-ton Truck, Motor No. AA2969560, Hetch Hetchy Water Supply No. 129	250.00	3,231.00
1045-C24E	GENERAL CONSTRUCTION EQUIPMENT		
	One Engine, Gas, Fairbanks-Morse, 3 h.p., Type Z	$55.99	
	One Concrete Mixer, Portable, Engine Driven	500.00	
	One Concrete Mixer, J4 Jaeger, ¼-yard	123.80	
	One Concrete Mixer, J4 Jaeger, ¼-yard	120.00	
	One Rock Screening Plant, Gas Engine Driven	500.00	
	One Skiff, Wooden, with 2 8-foot Ash Oars	96.13	1,395.92
1049-C24J	GENERAL CAPITAL UNCLASSIFIED		
	Sale of Construction Buildings at Early Intake	$10.00	
	Sale of Construction Buildings at South Fork	50.00	
	Log Boom on Lake Eleanor	653.54	
	Gauging Station on Middle Fork, Tuolumne River	384.37	
	Partial Replacement of Ties in Hetch Hetchy Railroad	557.56	1,655.47
1050-C25E	MISCELLANEOUS CONSTRUCTION EXPENDITURES		
	Sale of Surplus Construction Materials, Supplies and Equipment	$1,240.13	
	Sale, Repair and Handling of Surplus Construction Materials, Supplies and Equipment	11,516.70	12,756.83
	Total Retirements		$22,978.08

SCHEDULE No. 1C

HETCH HETCHY WATER SUPPLY

RESERVE FOR DEPRECIATION OF PLANT

June 30, 1940

Description	1 Value in Service	2 Cost of Removal	3 Salvage	4 Net Debits to Reserve 1+2—3=4	5 Credits to Reserve	6 Credit Balance 5—4=6
Balance of Reserve, June 30, 1939—(Credit)						$5,100,238.81
Amounts Credited to Reserve and Charged to Expense, Fiscal Year 1939-40					$1,309,483.49	
Accrued Depreciation on Equipment Transferred from Hetch Hetchy Power Div.					121.48	
Retirement of:						
One 100-cell Battery Unit at O'Shaughnessy Dam	$781.00	......	$29.88	$751.12		
One Ford Touring Car, Motor No. 20484, Hetch Hetchy Water Supply No. 160	50.00	......	......	50.00		
One Ford V8 ½-ton Pickup, Motor No. 18-3742155, Hetch Hetchy Water Supply No. 11	685.00	......	268.95	416.05		
One Chevrolet Carry-All Truck, Motor No. K-5630580, Hetch Hetchy Water Supply No. 4	874.00	......	350.00	524.00		
One Ford Sedan, Motor No. 18-1686700	749.00	......	185.00	564.00		
One Ford ½-ton Pickup, Motor No. 1240428, Hetch Hetchy Water Supply No. 208	623.00	......	216.63	406.37		
One Ford ½-ton Truck, Motor No. AA-2969560, Hetch Hetchy Water Supply No. 129	250.00	......	......	250.00		
One Engine, Gas, Fairbanks-Morse, 3 h.p., Type Z	55.99	......	......	55.99		
One Concrete Mixer, Portable, Engine Driven	500.00	......	......	500.00		
One Concrete Mixer, J4 Jaeger, ¼-yard	123.80	......	......	123.80		
One Concrete Mixer, J4 Jaeger, ¼-yard	120.00	......	......	120.00		
One Rock Screening Plant, Gas Engine Driven	500.00	......	......	500.00		
One Skiff, Wooden, with 2 8-foot Ash Oars	96.13	......	......	96.13		
Log Boom on Lake Eleanor	653.54	......	......	653.54		
Gauging Station on Middle Fork of Tuolumne River	384.37	......	......	384.37		
Partial Replacement of Ties in Hetch Hetchy Railroad	557.56	......	......	557.56		
	$7,003.39	0	$1,050.46	$5,952.93	$1,309,604.97	$1,303,652.04
						$6,403,890.85

SCHEDULE No. 2

HETCH HETCHY WATER SUPPLY

DETAIL OF FUNDS, BONDED DEBT, AND WARRANTS OUTSTANDING

June 30, 1940

	Operating Funds	Bond Funds	Land Purchases H.H.W.S. Fund	Bond Interest Funds	Bond Redemption Funds	Bonded Debt Matured Unpaid	Bonded Debt Unmatured	Bond Interest Matured Unpaid	Bond Interest Accrued Not Due	Warrants Outstanding
1910—4½%	....	....	....	$578,722.50	$1,001,000.00	$1,000.00 $1,000,000.00*	$24,000,000.00	$16,222.50 562,500.00*	....	....
1925—5%	....	....	....	184,400.00	....	....	7,250,000.00	3,150.00 181,250.00*	....	....
1928—4½%	....	$584.06	....	14,332.50	....	600,000.00*	22,200,000.00	14,332.50 513,000.00*	....	$506.00
1932—5¾%	....	....	....	57,097.50	....	....	3,987,000.00	57,097.50	19,104.37	....
1932—5%	....	....	....	11,525.00	....	....	1,192,000.00	11,525.00	4,966.67	....
1932—4½%	....	....	....	495.00	....	....	143,000.00	495.00	536.25	....
1932—4%	....	....	....	1,640.00	10,000.00	10,000.00	260,000.00	1,640.00	866.65	....
1932—3%	....	....	....	1,275.00	....	....	194,000.00	1,275.00	485.00	....
1932—2¾%	....	97,851.91	....	2,268.75	....	....	324,000.00	2,268.75	742.50	....
1933—4%	....	24,700.16	....	39,920.00	....	....	2,450,000.00	39,920.00	8,166.67	20,000.00
Hetch Hetchy Water Supply..	$80,648.62	....	....	....	....	....	....	....	....	8,300.68
Hetch Hetchy Water Supply..	....	....	$1,302.50	....	....	....	....	....	....	....
	$80,648.62	$123,136.13	$1,302.50	$891,676.25	$1,011,000.00	$11,000.00 $1,600,000.00*	$62,000,000.00	$147,926.25 $1,256,750.00*	$34,868.11	$28,806.68
Less H. H. Power Division Proportion of Bonded Debt Unmatured......................							7,379,800.00			
							$54,620,200.00			

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*Maturing July 1, 1940.

SCHEDULE No. 3

HETCH HETCHY WATER SUPPLY

DETAIL OF INTERFUND BALANCES

June 30, 1940

	PUBLIC SERVICE ENTERPRISES	Order	Department Number	Controller's Number	Invoice Number	Debit	Credit
3300	SAN FRANCISCO WATER DEPARTMENT						
	Automobile Maintenance—Lighting of Public Streets and Buildings Cars, License Nos. E23002, E23003	W. O.	968-18	1581	6-82		$202.55
	Long Distance Telephone Service, Photography and Miscellaneous Service, Jan. 1 to June 30, 1940	W. O.	968-17	1300	6-83		73.10
	Automobile Insurance Premiums, Fiscal Year 1939-1940	W. O.	968-9	497	6-87		780.50
	Refund of Balance of Operating Advance for Year 1939-40				J.E. 6-57		10,215.16
							$11,271.31
3310	HETCH HETCHY POWER DIVISION						
	Repair Waterbuckets—Moccasin Powerhouse	W. O.	976-24	2658	H 6-5	$924.21	
	Routine Maintenance—Communication System, January 1 to June 30, 1940	W. O.	967-18, 22	1338, 2546	H 6-6	4,413.43	
	Routine Transmission Maintenance, January 1 to June 30, 1940	W. O.	967-17, 23	1337, 2587	H 6-7	6,017.59	
	Due from Hetch Hetchy Power for Unbilled Work Orders	W. O.	967-21	1677	J.E. 6-49	2,263.93	
	Install Armor Rods on Transmission Conductors	W. O.	967-14	667	H 6-8	845.95	
	Refund of Balance of Operating Advance for Year 1939-40				J.E. 6-57		$10,203.95
						$14,465.11	$10,203.95
3340	SAN FRANCISCO AIRPORT						
	Fund advances from 1933 Hetch Hetchy Bond Fund for Engineering Expenditures					$3,297.15	
	Field Engineering, Supervision and Inspection of 1938 Airport Project, April, May and June, 1940	W. O.	99-65	2097	H 6-9	5,434.20	
						$8,731.35	
3370	1932 HETCH HETCHY BOND FUND						
	Due to the Hetch Hetchy Water Supply Fund from the 1932 Hetch Hetchy Bond Fund for Refund by P. G. & E. on the Tesla Chlorinator Power Line, 1937-38, 1938-39, 1939-40, Deposited in the 1932 Hetch Hetchy Bond Fund					$284.42	
3371	HETCH HETCHY WATER SUPPLY FUND						
	Due from the 1932 Hetch Hetchy Bond Fund to the Hetch Hetchy Water Supply Fund for Refund by the P. G. & E. on the Tesla Chlorinator Power Line, 1937-38, 1938-39, 1939-40, Deposited in the 1932 Hetch Hetchy Bond Fund						$284.42
						$23,480.88	$21,759.68

SCHEDULE No. 4

HETCH HETCHY WATER SUPPLY

DETAIL OF INTERFUND BALANCES

June 30, 1940

	GENERAL CITY AND COUNTY	Order	Department Number	Controller's Number	Invoice Number	Debit	Credit
3400	EMPLOYEES' RETIREMENT SYSTEM						
	H. H. W. S. Employees' Contributions, May, 1940	D. P.			5- 6		$472.48
	H. H. W. S. Employees' Contributions, May, 1940	D. P.			5- 7		184.11
	H. H. W. S. Employees' Contributions, June, 1940	D. P.			6- 6		184.16
	H. H. W. S. Employees' Contributions, June, 1940	D. P.			6- 7		449.55
	H. H. W. S. Employees' Compensation and Medical	D. P.			6-12		30.90
	H. H. W. S. Employees' Compensation and Medical	D. P.			6-13		117.37
							$1,438.57
3440	PUBLIC UTILITIES COMMISSION						
	Salaries, Wages, etc., Investigation of Claims for H. H. W. S., January 1 to June 30, 1940	W. O.	968-16 968-22 968-25	1627 2359 2790	6-84		$6,379.12
	Salaries, Wages, etc., Investigation of Claims of Riparian Owners on Tuolumne River for H. H. W. S.	W. O.	968-11	668	6-85		889.84
	Personal Services and Incidental Expenses in Connection with John A. Bunting Case	W. O.	892-16	3220	6-26		998.43
	Personal Services and Incidental Expenses in Connection with John A. Bunting Case	W. O.	992-18	2446	6-80		1,189.80
	Personal Services and Incidental Expenses in Connection with Transbay Construction Company Case	W. O.	994- 1	624	6-78		1,808.61
	Personal Services and Incidental Expenses, Complete Records Re: Construction, Hetch Hetchy Project	W. O.	892- 9	2618	6-86		601.29
	Reimbursements in Transit at June 30, 1940, of Expenditures Made from H. H. W. S. Revolving Fund for Public Utilities Commission, Bureau of Engineering Expenses				J.E. 6-58	$1,178.11	
						$1,178.11	$11,867.09
3450	GENERAL FUND						
	Due to General Fund for Payment of Electricity Bills from Sept. 1 to June 30, 1940						$156.10
	Transfer from Cash Reserve Fund for Temporary Loan in Anticipation of Collection on Liquidation of Work Orders				J.E. 6-18		20,000.00
						$1,178.11	$33,461.76

HETCH HETCHY WATER SUPPLY

DETAIL OF EXPENDITURES FOR OPERATING EXPENSES

FISCAL YEAR 1939-40

Account	Description	Total Expenditure	Hetch Hetchy Power Division Proportion		San Francisco Water Department Proportion	
			Per Cent	Amount	Per Cent	Amount
	PLANT OPERATING					
6000	Salaries and Wages	$22,465.95	53.07	$11,922.39	46.93	$10,543.56
6010	Contribution to Retirement System	1,048.33	28	293.53	72	754.80
6030	Traveling	424.07	..	......	100	424.07
6050	Operating Supplies	1,053.59	..	......	100	1,053.59
6096	Rent of Warehouse	90.00	..	......	100	90.00
		$25,081.94	..	$12,215.92	..	$12,866.02
	REPAIRS AND MAINTENANCE					
7000	Buildings and Structures (Water)	$764.25	..	......	100	$764.25
7001	Buildings and Structures (Power)	7,550.94	100	$7,550.94	..	......
7002	Buildings and Structures (Joint)	$18,722.95	80	14,978.36	20	3,744.59
7005	Forebays, Penstocks, and Tailraces	1,771.00	100	1,771.00	..	......
7010	Reservoirs, Dams, and Intakes	7,595.39	80	6,076.31	20	1,519.08
7015	Waterways	612.53	80	490.02	20	122.51
7020	Pipe Lines	5,556.00	10	555.60	90	5,000.40
7025	Hydraulic Power Plant Equipment	2,639.46	100	2,639.46	..	......
7030	Miscellaneous Equipment (Joint)	2,556.63	50	1,278.31	50	1,278.32
7035	Aqueduct Tunnels	2,498.08	..	......	100	2,498.08
7040	Roads and Trails (Mather to Moccasin)	11,916.29	50	5,958.15	50	5,958.14
7041	Roads and Trails (Moccasin to Tesla)	2,439.10	50	1,219.55	50	1,219.55
7042	Roads and Trails (Tesla to Irvington)	1,526.15	..	......	100	1,526.15
7050	Automotive Transportation Equipment (Water)	1,546.99	..	......	100	1,546.99
7051	Automotive Transportation Equipment (Joint)	921.36	50	460.68	50	460.68
7052	Automotive Transportation Equipment (Power)	2,548.90	100	2,548.90	..	......
7090	Miscellaneous	1,573.42	50	786.71	50	786.71
7095	Hydrography	4,757.87	20	951.57	80	3,806.30
3602–224	Install Armor Rods on Transmission Line	767.26	100	767.26	..	......
		$78,264.57	..	$48,032.82	..	$30,231.75

	ADMINISTRATIVE AND GENERAL					
8000	Salaries and Wages	$33,998.19	13.29	$4,518.11	86.71	$29,480.08
8005	Contributions to Retirement System	1,358.65	28	380.42	72	978.23
8010	Services of Other Departments	6,425.22	..	......	100	6,425.22
8015	Professional Services	1,236.75	..	......	100	1,236.75
8020	Stationery, Office Supplies, and Postage	209.06	..	......	100	209.06
8021	Sundry Office Expense	13.62	..	......	100	13.62
8025	Telephone and Telegraph	571.00	..	......	100	571.00
8030	Traveling	334.83	..	......	100	334.83
8040	Injuries and Damages	72.88	..	......	100	72.88
8051	Automobile Insurance Premium	780.50	..	......	100	780.50
8061	Water Rights and Damage Claims	26,877.81	..	......	100	26,877.81
8062	Legal Expense—Litigation, re Water Rights	200.00	..	......	100	200.00
8063	Legal Expense—Resisting Claims of Riparian Owners on Tuolumne River	3,957.84	56.67	2,242.91	43.33	1,714.93
8064	Legal Expense—Transbay Suit	56.00	100	56.00	..	......
8095	Miscellaneous	4.00	..	......	100	4.00
		$76,096.35	..	$7,197.44	..	$68,898.91
	FIXED CHARGES					
9010	Rents	$30,000.00	50	$15,000.00	50	$15,000.00
9020	Taxes (Actually Paid)	8,636.14	50	4,318.07	50	4,318.07
		$38,636.14	..	$19,318.07	..	$19,318.07
	Total Operating Expenses	$218,079.00	39.79	$86,764.25	60.21	$131,314.75

HETCH HETCHY WATER SUPPLY

REPORT OF EXPENDITURES—FISCAL YEAR 1939-40

Account	Description	Total Expenditure	Hetch Hetchy Power Division Proportion		San Francisco Water Department Proportion	
			Per Cent	Amount	Per Cent	Amount
	Expenditures for Operating Expenses (Detail Attached)	$218,079.00	39.79	$86,764.25	60.21	$131,314.75
	Expenditures for:					
	EQUIPMENT					
C-14/1	One 6-inch Sterling Model 90 M Gas Engine Self-Priming Pump	$935.24	50	$467.62	50	$467.62
	REPLACEMENTS					
3608-C6A-1	Gauging Station—Middle Fork	$384.37	20	$76.87	80	$307.50
3608-C7-1	Log Boom at Lake Eleanor	653.54	80	522.83	20	130.71
3608-C24D-1	1937 Ford ½-ton Pickup Truck No. 11	416.00	..	......	100	416.00
3608-C24D-2	Chevrolet Station Wagon No. 4	501.30	50	250.65	50	250.65
3608-C24D-3	1935 Ford ½-ton Pickup No. 208	493.18	..	......	100	493.18
3608-C24D-4	1935 Ford V8 Sedan No. 209	610.23	..	......	100	610.23
	Total Replacements	$3,058.62	27.8	$850.35	72.2	$2,208.27
	Total Expenditures—Operating, Equipment and Replacements	$222,072.86	39.66	$88,082.22	60.34	$133,990.64
	Reserve for Unexpended Operating Advances, June 30, 1940 (Detail Attached)	4,676.77	..	......	100	4,676.77
	Total Expenditures and Reserve, as of June 30, 1940	$226,749.63	38.85	$88,082.22	61.15	$138.667.41
	ADVANCES					
	Reserve for Unexpended Operating Advances, June 30, 1939 (Detail Attached)	$5,781.74		$2,027.17		$3,754.57
	Annual Appropriation Ordinance, Fiscal Year 1939-40, Controller's Cash Transfer Voucher No. 99, Sept. 8, 1939	220,387.00		83,759.00		136,628.00
	Supplemental Appropriation, Ordinance No. 257, Controller's Cash Transfer Voucher No. 80, Aug. 22, 1939	15,000.00		7,500.00		7,500.00
	Supplemental Appropriation, Ordinance No. 248, Controller's Cash Transfer Voucher No. 95, Sept. 1, 1939	2,000.00		1,000.00		1,000.00
	Supplemental Appropriation, Ordinance No. 411, Controller's Cash Transfer Voucher No. 317, Dec. 27, 1939	4,000.00		4,000.00		......
		$247,168.74		$98,286.17		$148,882.57
	Refund Due	*20,419.11*		*10,203.95*		*10,215.16*
		$226,749.63		$88,082.22		$138,667.41

Italic figures denote loss and deficiency.

HETCH HETCHY WATER SUPPLY

RESERVE OF SAN FRANCISCO WATER DEPARTMENT AND HETCH HETCHY POWER DIVISION OPERATING ADVANCES FOR COMMITMENTS—JUNE 30, 1940

						Hetch Hetchy Power Division Proportion		San Francisco Water Department Proportion	
Order	Number	Contractor or Vendor	Appropriation	Account	Amount	Per Cent	Amount	Per Cent	Amount
Work	668-3/2316	Turlock Irrigation District	668.500.08	2000–508	$950.00	...	......	100	$950.00
Enc. Req.	968-12/171	City of Oakdale	968.200.00	6050	7.00	...	......	100	7.00
Enc. Req.	968- 4/115	A. E. Chandler	968.604.03	8063	952.60	...	......	100	952.60
Work	968-11/668	P. U. C. Bureau of Engineering	968.604.03	8063	2,110.16	...	......	100	2,110.16
Enc. Req.	968-11A/210	Treasurer, U. S. A.—Geological Survey	968.991.00	7095	311.50	...	......	100	311.50
Purchase	50891	Tide Water Associated Oil Company	968.991.00	7050	30.00	...	......	100	30.00
Purchase	51206	Kahn & Keville	968.991.00	7050	25.00	...	......	100	25.00
Purchase	51214	Fred J. Lautze	968.991.00	7050	25.00	...	......	100	25.00
Purchase	51282	Tide Water Associated Oil Company	968.991.00	7050	30.00	...	......	100	30.00
Purchase	51283	Tide Water Associated Oil Company	968.991.00	7050	40.00	...	......	100	40.00
Purchase	51284	Tide Water Associated Oil Company	968.991.00	7050	70.00	...	......	100	70.00
Purchase	51285	Tide Water Associated Oil Company	968.991.00	7050	20.00	...	......	100	20.00
Purchase	51286	Tide Water Associated Oil Company	968.991.00	7050	25.00	...	......	100	25.00
Purchase	51287	Tide Water Associated Oil Company	968.991.00	7050	40.00	...	......	100	40.00
Purchase	51289	Tide Water Associated Oil Company	968.991.00	7050	30.00	...	......	100	30.00
Purchase	51510	Marshall Newell Supply Co.	968.991.00	7050	10.51	...	......	100	10.51
					$4,676.77				$4,676.77

HETCH HETCHY WATER SUPPLY

RESERVE OF SAN FRANCISCO WATER DEPARTMENT AND HETCH HETCHY POWER OPERATING

ADVANCES FOR COMMITMENTS, AS OF JUNE 30, 1939

					Hetch Hetchy Power Proportion		San Francisco Water Department Proportion	
Order	Number	Contractor or Vendor	Account	Amount	Per Cent	Amount	Per Cent	Amount
Purchase	45884	Tide Water Associated Oil Company	7052	$25.00	100	$25.00	...	......
Purchase	46267	Kahn and Keville	7050	25.00	...	......	100	$25.00
Purchase	46503	General Electric Supply Corporation	3602-224	21.37	100	21.37	...	......
Purchase	46535	Byers and Orum	7052	25.00	100	25.00	...	......
Purchase	46536	Stuart Oxygen Co.	7090-5	5.00	50	2.50	50	2.50
Purchase	46571	Central Garage and Battery Co.	7052	25.00	100	25.00	...	......
Purchase	46573	Stuart Oxygen Co.	7035-3	1.20	...	......	100	1.20
Purchase	46574	Priola and Rider	7050	25.00	...	......	100	25.00
Purchase	46575	Central Garage and Battery Co.	7050	25.00	...	......	100	25.00
Purchase	46606	Tide Water Associated Oil Company	7050	40.00	...	......	100	40.00
Purchase	46607	Tide Water Associated Oil Company	7050	30.00	...	......	100	30.00
Purchase	46608	Kahn and Keville	7050	25.00	...	......	100	25.00
Purchase	46609	Tide Water Associated Oil Company	7050	70.00	...	......	100	70.00
Purchase	46610	Earle C. Anthony, Inc.	7050	50.00	...	......	100	50.00
Purchase	46611	Tide Water Associated Oil Company	7052	60.00	100	60.00	...	......
Purchase	46612	Laurent and Mills	7052	50.00	100	50.00	...	......
Purchase	46613	Tide Water Associated Oil Company	7052	25.00	100	25.00	...	......
Purchase	46650	Johnson Mfg. Co.	3602-224	81.20	100	81.20	...	......
Purchase	46872	Peterson Tractor and Equipment Co.	7051	48.01	50	24.00	50	24.01
Purchase	47015	Patterson Parts, Inc.	7090-5	25.75	50	12.88	50	12.87
Purchase	47016	C. W. Marwedel	7090-5	12.44	50	6.22	50	6.22
Purchase	47116	Kahn and Keville	7050	63.41	...	......	100	63.41
Work	668-3/2316	Turlock Irrigation District	2000-508	950.00	...	......	100	950.00
Enc. Req.	868-1/27	M. G. Callaghan	8061	100.00	...	......	100	100.00
Enc. Req.	868-3/28	U. S. Geological Survey	7095	680.02	20	136.00	80	544.02
Enc. Req.	868-3/28	U. S. Geological Survey	8061	318.34	...	......	100	318.34
Work	868-6/198	Install Armor Rods on Transmission Conductors	3602-224	850.00	100	850.00	...	......
Work	668-3/2316	Meter Rating Station—Turlock (1936-1937)	2000-508	950.00	10	95.00	90	855.00
		Pump Low Head Suction, 1500 to 2000 G.P.M.	2000-1045	1,175.00	50	588.00	50	587.00
				$5,781.74		$2,027.17		$3,754.57

HETCH HETCHY WATER SUPPLY AND POWER PROJECT CONSOLIDATED BALANCE SHEET

June 30, 1940

ASSETS AND OTHER DEBITS

Utility Plant	Total	Power	Water
Electric Plant	$12,385,000.52	$12,385,000.52	....
Water Supply Property	93,237,270.04	....	$93,237,270.04
Total Utility Plant	$105,622,270.56	$12,385,000.52	$93,237,270.04
Investments			
Other Physical Property:			
Amazon and Glen Park Reservoir Sites	$460,925.00	....	$460,925.00
Total Investments	$460,925.00	....	$460,925.00
Current and Accrued Assets			
Cash—On Deposit with Treasurer:			
Hetch Hetchy Water Supply Fund	$80,648.62	....	$80,648.62
Hetch Hetchy Power Operating Fund	80,368.33	$80,368.33	....
Hetch Hetchy Reconstruction and Replacement Fund	274,808.40	274,808.40	....
Hetch Hetchy Bond Funds	123,136.13	....	123,136.13
Special Deposits with Treasurer:			
Hetch Hetchy Bond Interest Funds	891,676.25	....	891,676.25
Hetch Hetchy Bond Redemption Funds	1,011,000.00	....	1,011,000.00
Hetch Hetchy Land Purchase Fund	1,302.50	....	1,302.50
Working Funds:			
Hetch Hetchy Power Revolving Fund	2,965.19	2,965.19	....
Hetch Hetchy Water Supply Revolving Fund	3,821.89	....	3,821.89
Cash in Transit	448.15	448.15	....
Accounts Receivable:			
Accounts Receivable—Customers	200,406.45	200,406.45	....
Other Accounts Receivable	161.60	....	161.60
Receivables from Municipality— Interfund Accounts—P. S. E.:			
H. H. P. D. from H. H. W. S.	10,203.95	10,203.95	....
H. H. W. S. from H. H. P. D.	14,465.11	....	14,465.11
San Francisco Airport	8,731.35	....	8,731.35
Interfund Accounts—General City and County:			
Recreation Department	297.88	297.88	....
Electric Power Bureau	827.09	827.09	....
Public Utilities Commission	1,178.11	....	1,178.11
Material and Supplies:			
Electric	16,947.01	16,947.01	....
Corral Hollow Pipe Line	273,850.00	....	273.850.00
Prepayments:			
Prepaid Tesla Chlorinator Power Line	4,008.08	....	4,008.08
Total Current and Accrued Assets	$3,001,252.09	$587,272.45	$2,413.979.64
Deferred Debits			
Work in Progress:			
Accounts Receivable and Interfund	$675.19	....	$675.19
Plant Repairs	82.99	....	82.99
Replacements—Power	2,263.93	$2,263.93	....
Total Deferred Debits	$3,022.11	$2,263.93	$758.18
Total Assets and Other Debits	$109,087,469.76	$12,974,536.90	$96,112.932.86

HETCH HETCHY WATER SUPPLY AND POWER PROJECT

CONSOLIDATED BALANCE SHEET

June 30, 1940—Continued

LIABILITIES AND OTHER CREDITS

Long Term Debt	Total	Power	Water
Bonds—Municipality:			
Due July 1, 1940	$1,600,000.00	....	$1,600,000.00
Issue 1910, Due July 1, 1941, to July 1, 1964	24,000,000.00	$2,856,697.00	21,143,303.00
Issue 1925, Due Jan. 1, 1941, to Jan. 1, 1969	7,250,000.00	862,960.00	6,387,040.00
Issue 1928, Due July 1, 1941, to July 1, 1977	22,200,000.00	2,642,444.00	19,557,556.00
Issue 1932, Due June 1, 1941, to June 1, 1971	6,100,000.00	726,077.00	5,373,923.00
Issue 1933, Due Dec. 1, 1940, to Dec. 1, 1953	2,450,000.00	291,622.00	2,158,378.00
Total Long Term Debt	$63,600,000.00	$7,379,800.00	$56,220,200.00
Current and Accrued Liabilities			
Accounts Payable:			
General Creditors	$11,492.73	$7,123.22	$4,369.51
Warrants Outstanding	34,251.19	5,444.51	28,806.68
Revolving Fund Reimbursements in Transit	290.29	290.29	....
Payables to Municipality—			
Interfund Accounts—P. S. E.:			
H. H. W. S. to H. H. P. D.	10,203.95	....	10,203.95
H. H. P. D. to H. H. W. S.	14,465.11	14,465.11	....
San Francisco Water Department	11,760.53	489.22	11,271.31
Interfund Accounts—General City and County:			
Employees Retirement System	1,723.41	284.84	1,438.57
Lighting of Public Streets and Buildings	165.99	9.89	156.10
General Fund—Cash Reserve Fund	220,000.00	200,000.00	20,000.00
Public Utilities Commission Fund	11,867.09	....	11,867.09
Matured Long Term Debt:			
Matured Bonds Not Presented for Payment	11,000.00	....	11,000.00
Matured Interest:			
Due July 1, 1940	1,256,750.00	....	1,256,750.00
Matured Coupons Not Presented for Payment	147,926.25	....	147,926.25
Interest Accrued—Not Due	34,868.11	....	34,868.11
Other Current and Accrued Liabilities:			
Fee Due U. S. Government (Raker Act)	15,000.00	....	15,000.00
Total Current and Accrued Liabilities	$1,781,764.65	$228,107.08	$1,553,657.57
Reserves			
Reserve for Depreciation of Electric Plant	$3,885,386.66	$3,885,386.66	....
Reserve for Depreciation of Water Property	6,403,890.85	....	$6,403,890.85
Reserve for Amortization of Tesla Chlorinator Power Line	1,003.33	....	1,003.33
Injuries and Damages Reserve	747.28	....	747.28
Employees' Provident Reserve:			
Reserve for Vacations	3,897.09	....	3,897.09
Reserve for Sick Leave	331.84	....	331.84
Reserve for Retirement System	4,752.15	....	4,752.15
Reserve of Advance for Work Not Yet Performed—S. F. W. D.	4,676.77	....	4,676.77
Total Reserves	$10,304,685.97	$3,885,386.66	$6,419,299.31
Total Liabilities	$75,686,450.62	$11,493,293.74	$64,193,156.88
Surplus			
Surplus (See Detail Annexed)	$33,401,019.14	$1,481,243.16	$31,919,775.98
Total Liabilities and Other Credits	$109,087,469.76	$12,974,536.90	$96,112,932.86

HETCH HETCHY WATER SUPPLY AND POWER PROJECT

CONSOLIDATED SURPLUS ACCOUNT

FOR THE TWELVE MONTHS ENDED JUNE 30, 1940

Balance, June 30, 1939			$34,260,753.01
Additions to Surplus:			
Net Earnings from Power Operations, Fiscal Year 1939-1940		$1,518,792.27	
Adjustment of Depreciation Expense. Prior to June 30, 1939		1,267.16	
Miscellaneous Additions to Surplus, Fiscal Year 1939-1940		168.97	
Contributions from the San Francisco Water Department:			
For Bond Interest and Redemption	$547,719.00		
For Additions and Replacements	2,675.89		
For Operating Expenses, Water Production, Fiscal Year 1939-1940	131,314.75	681,709.64	
Contribution from General Fund for Bond Interest and Redemption		1,007,927.69	
Total Additions to Surplus, 1939-1940			3,209,865.73
			$37,470,618.74
Deductions from Surplus:			
Net Loss from Water Production. Fiscal Year 1939-1940		$4,047,350.65	
Adjustment of Depreciation Expense, Prior to June 30, 1939		18,190.38	
Material and Equipment Transferred to the San Francisco Water Dept.		4.058.57	
Total Deductions from Surplus, 1939-1940			4,069,599.60
Balance, June 30, 1940			$33,401,019.14

Composition of Surplus, Cumulative to June 30, 1940

Additions to Surplus:			
Net Earnings from Power Operations, August 16, 1925, to June 30, 1940.		$20,631,415.78	
Contributions from the San Francisco Water Department, July 1. 1935, to June 30, 1940:			
For Bond Interest and Redemption	$2,335,819.00		
For Additions and Replacements	29,018.36		
For Operating Expenses, Water Production, July 1, 1935, to June 30, 1940	522,352.97	2,887,190.33	
Contribution from General Fund for Bond Interest and Redemption		31,117,660.33	
Interest Earned on Loans to Other Funds		77,801.23	
Bond Premium, Hetch Hetchy Bond Issues		1,377,607.81	
Federal Grants on Public Works Projects		1,211,450.00	
Miscellaneous Additions to Surplus		3,502.83	
Total Additions to Surplus			$57,306,628.31
Deductions from Surplus:			
Net Loss from Water Production, July 1, 1935, to June 30, 1940		$20,365.755.75	
Bond Discount, 1910 Hetch Hetchy Bond Fund		737.956.39	
Cost of San Lorenzo Pipe Line Transferred to San Francisco Water Dept.		1.063,840.76	
Retirement of Corral Hollow Pipe Line		1,333,375.00	
California Railroad Commission Evaluation of P. G. & E. and Great Western Power Co.'s Properties, 1924-1929		392.006.43	
Miscellaneous Deductions of Surplus		12.674.84	
Total Deductions from Surplus			23,905.609.17
Surplus, June 30, 1940			$33,401,019.14

HETCH HETCHY WATER SUPPLY AND POWER PROJECT

CONSOLIDATED COMPARATIVE INCOME STATEMENT

June 30, 1940

UTILITY OPERATING INCOME	Fiscal Year Ended June 30, 1940			Fiscal Year Ended June 30, 1939		
	Total	Power	Water	Total	Power	Water
Operating Revenue:						
Moccasin Power House						
General Consumers, P. G. & E.	$8,636,265.93	$8,636,265.93	....	$8,615,674.12	$8,615,674.12	....
Less Distribution Commission	6,310,087.70	6,310,087.70	....	6,295,042.30	6,295,042.30	....
	$2,326,178.23	$2,326,178.23	....	$2,320,631.82	$2,320,631.82	....
Construction, Operating and Miscellaneous	486.96	486.96	....	488.01	488.01	....
	$2,326,665.19	$2,326,665.19	....	$2,321,119.83	$2,321,119.83	....
Early Intake Power House						
General Consumers, P. G. & E.	$308,455.36	$308,455.36	....	$356,213.35	$356,213.35	....
Less Distribution Commission	225,372.92	225,372.92	....	260,267.29	260,267.29	....
	$83,082.44	$83,082.44	....	$95,946.06	$95,946.06	....
Construction, Operating and Miscellaneous	2,675.62	2,675.62	....	2,392.00	2,392.00	....
	$85,758.06	$85,758.06	....	$98,338.06	$98,338.06	....
Total Power Sales	$2,412,423.25	$2,412,423.25	....	$2,419,457.89	$2,419,457.89	....

Operating Revenue Deductions:						
Operating Expenses						
Production Expense	$186,559.94	$143,134.43	$43,425.51	$189,781.73	$145,776.28	$44,005.45
Transmission Expense	29,148.78	29,148.78	....	28,189.51	28,189.51	....
Administrative and General Expense	134,772.00	65,873.09	68,898.91	126,552.48	65,805.66	60,746.82
Total Operating Expenses	$350,480.72	$238,156.30	$112,324.42	$344,523.72	$239,771.45	$104,752.27
Depreciation Expense	1,614,326.27	304,842.78	1,309,483.49	1,622,221.98	301,718.41	1,320,503.57
Taxes (Actually Paid)	8,636.14	4,318.07	4,318.07	8,141.65	4,075.46	4,066.19
Fee to U. S. Government (Raker Act)	30,000.00	15,000.00	15,000.00	25,000.00	12,500.00	12,500.00
Total Operating Revenue Deductions	$2,003,443.13	$562,317.15	$1,441,125.98	$1,999,887.35	$558,065.32	$1,441,822.03
Net Operating Revenues	$408,980.12	$1,850,106.10	*$1,441,125.98*	$419,570.54	$1,861,392.57	*$1,441,822.03*
Income from Non-Utility Operations	13,782.54	11,215.03	2,567.51	14,118.68	11,746.34	2,372.34
Gross Income	$422,762.66	$1,861,321.13	*$1,438,558.47*	$433,689.22	$1,873,138.91	*$1,439,449.69*
INCOME DEDUCTIONS						
Interest on Long-Term Debt	$2,951,321.04	$342,528.86	$2,608,792.18	$3,053,677.43	$354,438.00	$2,699,239.43
Valuation of Properties	....	....	....	15,495.64	4,932.12	10,563.52
Total Income Deductions	$2,951,321.04	$342,528.86	$2,608,792.18	$3,069,173.07	$359,370.12	$2,709,802.95
Net Loss Transferred to Surplus	*$2,528,558.38*	$1,518,792.27	*$4,047,350.65*	*$2,635,483.85*	$1,513,768.79	*$4,149,252.64*

Italic figures denote loss and deficiency.

HETCH HETCHY WATER SUPPLY AND POWER PROJECT

STATEMENT OF ANNUAL BOND REDEMPTION BY FISCAL YEARS

(Cash Basis)

Redemption Dates	July 1	July 1	January 1	July 1	June 1	December 1	
	Issue of						
Rate of Interest	1909	1910	1925	1928	1932	1933	Total
2¾%	....	....	....	....	$324,000.00	....	$324,000.00
3%	....	....	....	....	194,000.00	....	194,000.00
4%	....	....	....	....	280,000.00	$3,500,000.00	3,780,000.00
4½%	$600,000.00	$45,000,000.00	....	$24,000,000.00	143,000.00	....	69,743,000.00
5%	....	....	$10,000,000.00	....	1,234,000.00	....	11,234,000.00
5¾%	....	....	....	....	4,325,000.00	....	4,325,000.00
Total Issued	$600,000.00	$45,000,000.00	$10,000,000.00	$24,000,000.00	$6,500,000.00	$3,500,000.00	$89,600,000.00
Bonds Retired as of July 1, 1939	$600,000.00	$20,000,000.00	$2,500,000.00	$1,200,000.00	$200,000.00	$875,000.00	$25,375,000.00
Annual Redemption Fiscal Year							
1939-40		$1,000,000.00	$250,000.00	$600,000.00	$200,000.00	$175,000.00	$2,225,000.00
1940-41		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1941-42		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1942-43		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1943-44		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1944-45		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1945-46		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1946-47		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1947-48		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1948-49		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00

1949-50		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1950-51		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1951-52		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1952-53		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1953-54		1,000,000.00	250,000.00	600,000.00	200,000.00	175,000.00	2,225,000.00
1954-55		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1955-56		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1956-57		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1957-58		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1958-59		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1959-60		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1960-61		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1961-62		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1962-63		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1963-64		1,000,000.00	250,000.00	600,000.00	200,000.00	....	2,050,000.00
1964-65		....	250,000.00	600,000.00	200,000.00	....	1,050,000.00
1965-66		....	250,000.00	600,000.00	200,000.00	....	1,050,000.00
1966-67		....	250,000.00	600,000.00	200,000.00	....	1,050,000.00
1967-68		....	250,000.00	600,000.00	200,000.00	....	1,050,000.00
1968-69		....	250,000.00	600,000.00	200,000.00	....	1,050,000.00
1969-70		....	....	600,000.00	200,000.00	....	800,000.00
1970-71		....	....	600,000.00	100,000.00	....	700,000.00
1971-72		....	....	600,000.00	....	....	600,000.00
1972-73		....	....	600,000.00	....	....	600,000.00
1973-74		....	....	600,000.00	....	....	600,000.00
1974-75		....	....	600,000.00	....	....	600,000.00
1975-76		....	....	600,000.00	....	....	600,000.00
1976-77		....	....	600,000.00	....	....	600,000.00
Totals	$600,000.00	$45,000,000.00	$10,000,000.00	$24,000,000.00	$6,500,000.00	$3,500,000.00	$89,600,000.00

HETCH HETCHY WATER SUPPLY AND POWER PROJECT
STATEMENT OF ANNUAL BOND INTEREST BY FISCAL YEARS
(Cash Basis)

Interest Maturity Dates	July 1 January 1	July 1 January 1	July 1 January 1	July 1 January 1	December 1 June 1	December 1 June 1	
	Issue of						
Rate of Interest	1909	1910	1925	1928	1932	1933	Total
2¾%	....	....	....	....	$324,000.00	....	$324,000.00
3%	....	....	....	....	194,000.00	....	194,000.00
4%	....	....	....	....	280,000.00	$3,500,000.00	3,780,000.00
4½%	$600,000.00	$45,000,000.00	....	$24,000,000.00	143,000.00	....	69,743,000.00
5%	....	....	$10,000,000.00	....	1,234,000.00	....	11,234,000.00
5¾%	....	....	....	....	4.325,000.00	....	4,325,000.00
Total Issues	$600,000.00	$45.000,000.00	$10,000,000.00	$24,000,000.00	$6,500,000.00	$3,500,000.00	$89,600,000.00
Bond Interest Expense as of July 1, 1939	$72,900.00	$29,447,194.97	$5,530,527.69	$9,402,055.96	$2,265,650.07	$484,147.23	$47,202,475.92
Interest Fiscal Year							
1939-40		$1,125,000.00	$368,750.00	$1,026,000.00	$331,585.00	$101,500.00	$2,952,835.00
1940-41		1,080,000.00	356,250.00	999,000.00	320,417.50	94,500.00	2,850,167.50
1941-42		1,035,000.00	343,750.00	972,000.00	309,440.00	87,500.00	2,747,690.00
1942-43		990,000.00	331,250.00	945,000.00	298,462.50	80,500.00	2,645,212.50
1943-44		945,000.00	318,750.00	918,000.00	287,485.00	73,500.00	2,542,735.00
1944-45		900,000.00	306,250.00	891,000.00	276,507.50	66,500.00	2,440,257.50
1945-46		855,000.00	293,750.00	864,000.00	265,530.00	59,500.00	2,337,780.00
1946-47		810,000.00	281,250.00	837,000.00	254,712.50	52,500.00	2,235,462.50
1947-48		765,000.00	268,750.00	810,000.00	243,895.00	45,500.00	2,133,145.00
1948-49		720,000.00	256,250.00	783,000.00	233,077.50	38,500.00	2,030,827.50
1949-50		675,000.00	243,750.00	756,000.00	222,260.00	31,500.00	1,928,510.00

1950-51		630,000.00	231,250.00	729,000.00	211,442.50	24,500.00	1,826,192.50
1951-52		585,000.00	218,750.00	702,000.00	200,625.00	17,500.00	1,723,875.00
1952-53		540,000.00	206,250.00	675,000.00	189,872.50	10,500.00	1,621,622.50
1953-54		495,000.00	193,750.00	648,000.00	179,120.00	3,500.00	1,519,370.00
1954-55		450,000.00	181,250.00	621,000.00	168,367.50	....	1,420,617.50
1955-56		405,000.00	168,750.00	594,000.00	157,615.00	....	1,325,365.00
1956-57		360,000.00	156,250.00	567,000.00	146,862.50	....	1,230,112.50
1957-58		315,000.00	143,750.00	540,000.00	136,110.00	....	1,134,860.00
1958-59		270,000.00	131,250.00	513,000.00	125,360.00	....	1,039,610.00
1959-60		225,000.00	118,750.00	486,000.00	114,610.00	....	944,360.00
1960-61		180,000.00	106,250.00	459,000.00	103,860.00	....	849,110.00
1961-62		135,000.00	93,750.00	432,000.00	93,110.00	....	753,860.00
1962-63		90,000.00	81,250.00	405,000.00	82,360.00	....	658,610.00
1963-64		45,000.00	68,750.00	378,000.00	71,610.00	....	563,360.00
1964-65		....	56,250.00	351,000.00	61,377.50	....	468,627.50
1965-66		....	43,750.00	324,000.00	51,895.00	....	419,645.00
1966-67		....	31,250.00	297,000.00	42,412.50	....	370,662.50
1967-68		....	18,750.00	270,000.00	32,930.00	....	321,680.00
1968-69		....	6,250.00	243,000.00	23,447.50	....	272,697.50
1969-70		....	....	216,000.00	13,965.00	....	229,965.00
1970-71		....	....	189,000.00	4,482.50	....	193,482.50
1971-72		....	....	162,000.00	....	....	162,000.00
1972-73		....	....	135,000.00	....	....	135,000.00
1973-74		....	....	108,000.00	....	....	108,000.00
1974-75		....	....	81,000.00	....	....	81,000.00
1975-76		....	....	54,000.00	....	....	54,000.00
1976-77		....	....	27,000.00	....	....	27,000.00
Totals	$72,900.00	$44,072,194.97	$11,155,527.69	$29,409,055.96	$7,520,457.57	$1,271,647.23	$93,501,783.42

HETCH HETCHY WATER SUPPLY

ELECTRIC POWER BUREAU

AUTOMOTIVE EQUIPMENT OPERATIONS—COSTS AND CREDITS

THIRTY-THREE MONTH PERIOD, OCTOBER 1, 1937, TO JUNE 30, 1940

Acct. No.	Car No.	Make and Model	License No.	Mileage	Cost of Operation	Cost per Mile	Operating Credits	Excess of Costs Over Credits	Excess of Credits Over Costs	Revised Rate July 1, 1940
7050	0	1929 Ford Coupe	20 742	7,673	$141.44	$0.01843	$291.55	......	$150.11	$0.02
7052	1	1937 Dodge Coupe	20 160	40,879	1,109.86	.02715	1,466.30	......	356.44	.03
7052	2	1937 Graham Coupe B. M.	20 161	46,936	1,238.83	.02639	1,697.10	......	458.27	.03
7051	3	1936 Chevrolet Carry All	20 163	33,185	1,809.56	.05452	2,140.95	......	331.39	.06
7051	4	1936 Chevrolet Carry All (turned in 2/29/40)	20 162	22,918	1,485.24	.06480	1,491.16	......	5.92	..
7051	4-A	1940 Chevrolet Carry All	60 825	5,005	176.46	.03526	363.15	......	186.69	.04
7051	5	1937 International Pickup	20 164	17,791	1,544.98	.08684	1,274.84	$270.14	......	.10
7051	6	1933 Dodge Truck	20 165	10,164	743.89	.07319	832.87	......	88.98	.08
7051	7	1937 International Pickup	20 166	20,246	899.25	.04442	888.75	10.50	......	.05
7051	8	1933 Plymouth Coach	20 167	4,914	416.29	.08472	283.29	133.00	......	.09
7051	9	1937 Chevrolet Sport Sedan	20 168	32,425	1,111.02	.03426	1,123.81	......	12.79	.04
7051	10	1937 Ford Sedan	23 039	30,789	1,243.08	.04037	1,115.98	127.10	......	.05
7050	11	1937 Ford Pickup, ½ Ton (turned in 12/14/39)	20 169	56,649	1,149.80	.02029	2,081.01	......	931.21	..
7050	11-A	1940 Ford Pickup, ½ Ton	20 289	15,000	226.64	.01511	300.00	......	73.36	.02
7050	12	1938 Ford Coupe	25 173	76,965	1,417.94	.01842	2,435.59	......	1,017.65	.02
7050	13	1935 Ford Pickup, ½ Ton	20 743	38,632	884.97	.02291	1,332.50	......	447.53	.02
7051	14	1935 Ford Pickup, ½ Ton	20 170	12,434	659.24	.05302	642.67	16.57	......	.06
7050	16	1938 Packard Sedan	32 283	38,113	1,963.76	.05152	1,804.69	159.07	......	.06
7050	17	1937 Ford Truck	20 144	32,918	1,796.46	.05457	2,211.50	......	415.04	.05
7051	18	1937 International Pickup	20 171	24,962	1,100.11	.04407	1,462.34	......	362.23	.05
7051	19	White Railroad Bus		4,682	712.44	.15216	1,356.03	......	643.59	.15
7051	21	White Railroad Bus		330	24.38	.07387	38.94	......	14.56	.10

7051	29	1922 Buda Railway Speeder		1,124	122.78	.10923	60.91	61.87	......	.11
7051	30	1922 Buda Railway Speeder		485	40.22	.08293	36.74	3.48	......	.10
7050	31	1937 Ford Coupe	20 745	56,171	1,012.89	.01803	1,771.74	......	758.85	.02
7051	103	1920 White Truck, ¾ Ton	20 172	2,321	302.73	.13043	1,006.72	......	703.99	.15
7051	106	1920 White Truck, ¾ Ton	20 173	714	396.38	.5552	97.20	299.18	......	.60
7050	108	1920 White Truck, 5 Ton	20 746	3,067	450.66	.14694	833.70	......	383.04	.15
7051	109	1918 White Stake Truck, ¾ Ton	20 174	1,779	353.64	.19879	330.16	23.48	......	.20
7051	112	1938 Ford Dump Truck, 1½ Ton	25 720	13,132	935.96	.07127	1,405.22	......	469.26	.08
7051	114	1937 Chevrolet Dump Truck	20 175	12,770	985.16	.07715	1,172.82	......	187.66	.08
7050	120	1924 White Truck, 2 Ton	20 747	2,982	540.34	.18120	563.98	......	23.64	.20
7051	121	1924 White Winch Truck, 2 Ton	20 176	4,920	861.22	.17504	944.57	......	83.35	.18
7051	200	1936 F.W.D. Truck, 4-5 Ton	20 177	10,906	1,819.72	.16685	2,153.21	......	333.49	.17
7052	201	1938 F.W.D. Line Truck, 2½-3 Ton	25 665	11,724	1,364.29	.11637	2,161.05	......	796.76	.12
7052	202	1936 F.W.D. Line Truck, 1½ Ton	20 178	13,037	2,387.74	.18315	2,214.07	173.67	......	.20
7052	206	1933 Dodge Truck, 1½ Ton	20 179	6,169	634.97	.10293	681.40	......	46.43	.11
7050	208	1935 Ford Pickup, ½ Ton (turned in 4/10/40)	20 752	31,537	637.85	.02022	1,076.19	......	438.34	..
7050	208-A	1940 Ford Pickup, ½ Ton	60 988	2,565	44.79	.01746	39.10	5.69	......	.02
7050	209	1935 Ford Sedan (turned in 12/26/39)	20 753	14,725	966.65	.06565	548.02	418.63	......	..
7050	209-A	1940 Ford Tudor Sedan	19 834	5,803	105.79	.01823	330.36	......	224.57	.02
7051	1160	Caterpillar Tractor		1,701¼ hrs.	1,587.54	.93316 hr.	2,080.45	......	492.91	1.00 hr.
7051	1170	Plymouth Locomotive, 8 Ton		6,630	1,842.32	.27785	2,368.95	......	526.63	.30
7051	1171	Plymouth Locomotive, 20 Ton		3,794	3,095.61	.81592	1,711.05	1,384.56	......	.85
7051	1172	P. & H. Shovel		361½ hrs.	745.35	2.06182 hr.	808.80	......	63.45	2.10 hr.
7051	1173	Rotary Snow Plow		305	994.63	3.2610	746.40	248.23	......	3.25
7051	1174	Caterpillar Tractor		1,446½ hrs.	2,280.77	1.57675 hr.	2,463.25	......	182.48	1.60 hr.
7051	1176	Plymouth Locomotive		638	602.59	.94449	356.69	245.90	......	1.00
					$46,968.23		$54,597.77	$3,581.07	$11,210.61	
							46,968.23		3,581.07	
							$7,629.54		$7,629.54	

EXHIBIT A

HETCH HETCHY POWER DIVISION

PROPRIETARY BALANCE SHEET—JUNE 30, 1940

ASSETS AND OTHER DEBITS

Utility Plant

Fixed Capital:		
In Service—Hydraulic Production Plant (Schedule No. 1)	$8,576,922.25	
In Service—Hydraulic Transmission Plant (Schedule No. 1)	2,657,275.78	
In Service—Hydraulic General Plant (Schedule No. 1)	1,150,802.49	
Under Construction	0	$12,385,000.52
Reserve for Depreciation Electric Plant (Schedule No. 1)		3,885,386.66
Total Utility Plant		$8,499,613.86

Current and Accrued Assets

Cash on Deposit with Treasurer:		
Operating Fund	$80,368.33	
Reconstruction and Replacement Fund (Schedule No. 2)	274,808.40	$355,176.73

LIABILITIES AND OTHER CREDITS

Long Term Debt

Bonds:		
Due July 1, 1941, to July 1, 1977		$7,379,800.00

Current and Accrued Liabilities

Accounts Payable:		
General Creditors	$7,123.22	
Warrants Outstanding, Operating Fund	5,444.51	
Revolving Fund Reimbursements in Transit	290.29	12,858.02
Interfund Accounts—P. S. E. (Schedule No. 3):		
San Francisco Water Department	$489.22	
Hetch Hetchy Water Supply—Operating Funds	12,201.18	
Hetch Hetchy Water Supply—Reconstruction and Replacement Fund	2,263.93	14,954.33
Interfund Accounts, General City and County (Schedule No. 3):		
Employees' Retirement System	$284.84	
General Fund—Building and Street Lighting	9.89	
General Fund—Cash Reserve Fund	200,000.00	200,294.73
Total Current and Accrued Liabilities		$228,107.08

Cash—Other:		
Revolving Fund	$2,965.19	
Cash in Transit	448.15	3,413.34
Accounts Receivable		200,406.45
Interfund Accounts—P. S. E. (Schedule No. 3):		
Hetch Hetchy Water Supply		10,203.95
Interfund Accounts—General City and County (Schedule No. 3):		
Recreation Department	$297.88	
Electric Power Bureau	827.09	1,124.97
Material and Supplies		16,947.01
Total Current and Accrued Assets		$587,272.45
Deferred Debits		
Uncompleted Contracts, Purchase Orders and Other Commitments, Operating Fund (Contra)	$1,406.68	
Uncompleted Contracts, Purchase Orders and Other Commitments, Reconstruction and Replacement Fund (Contra)	1,028.35	2,435.03
Work in Progress		2,263.93
Suspense Debits		7.80
Total Deferred Debits		$4,706.76
Total		$9,091,593.07

Deferred Credits		
Uncompleted Contracts, Purchase Orders and Other Commitments, Operating Fund (Contra)	$1,406.68	
Uncompleted Contracts, Purchase Orders and Other Commitments, Reconstruction and Replacement Fund (Contra)	1,028.35	$2,435.03
Suspense Credits		7.80
Total Deferred Debits		$2,442.83
Total Liabilities and Other Credits		$7,610,349.91
Surplus		
Surplus (Exhibit C)		1,481,243.16
		$9,091,593.07

HETCH HETCHY POWER DIVISION

June 30, 1940

EXHIBIT B

COMPARATIVE INCOME STATEMENT

Fiscal Year Ended June 30, 1939, June 30, 1940, and Period August 16, 1925, to June 30, 1940

	Fiscal Year Ended June 30, 1940	Fiscal Year Ended June 30, 1939	Period Aug. 16, 1925, to June 30, 1940
Operating Revenues:			
Power Sales:			
Moccasin Power House:			
General Consumers, P. G. & E.	$8,636,265.93	$8,615,674.12	$117,792,439.65
Less Distribution Commission	6,310,087.70	6,295,042.30	86,065,046.10
	$2,326,178.23	$2,320,631.82	$31,727,393.55
Construction, Operating and Miscellaneous	486.96	488.01	711,397.41
	$2,326,665.19	$2,321,119.83	$32,438,790.96
Early Intake Powerhouse:			
General Consumers, P. G. & E.	$308,455.36	$356,213.35	$3,135,897.31
Less Distribution Commission	225,372.92	260,267.29	2,291,243.37
	$83,082.44	$95,946.06	$844,653.94
Construction, Operating and Miscellaneous	2,675.62	2,392.00	88,762.51
	$85,758.06	$98,338.06	$933,416.45
Total Power Sales	$2,412,423.25	$2,419,457.89	$33,372,207.41
Operating Revenue Deductions:			
Operating Expenses:			
Production Expenses	$143,134.43	$145,776.28	$2,387,322.22
Transmission Expenses	29,148.78	28,189.51	395,489.90
Administrative and General Expenses	65,873.09	65,805.66	806,323.70
Total Operating Expenses	$238,156.30	$239,771.45	$3,589,135.82
Depreciation Expenses	304,842.78	301,718.41	4,519,149.49
Taxes	4,318.07	4,075.46	61,186.46
Rents (Power Proportion, Raker Act)	15,000.00	12,500.00	228,500.00
Total Operating Revenue Deductions	$562,317.15	$558,065.32	$8,397,971.79
Net Operating Revenues	$1,850,106.10	$1,861,392.57	$24,974,235.64
Income from Non-Utility Operations	11,215.03	11,746.34	468,001.21
Gross Income	$1,861,321.13	$1,873,138.91	$25,442,235.85
Income Deductions:			
Interest on Long-term Debt	$342,528.86	$354,438.00	$4,792,229.78
Valuation of Property	0	4,932.12	4,932.12
Preliminary Investigations and Surveys, Distribution of Power by City	0	0	13,659.17
Total Income Deductions	$342,528.86	$359,370.12	$4,810,821.07
Net Income	$1,518,792.27	$1,513,768.79	$20,631,415.78

Comparative Charges for Federal and State Taxes as required by Section No. 64 of Charter:

1. Federal Income Tax; 16½ to 19 per cent of Net Income.
2. Federal Capital Stock Tax; $1.00 per $1,000 of declared value of Capital Stock.
3. Federal Excess Profits Tax; 6 per cent of such portion of Net Income in excess of 10 per cent and not in excess of 15 per cent of the declared value of Capital Stock; 12 per cent of such portion of Net Income in excess of 15 per cent of the declared value of Capital Stock.
4. California State Franchise Tax; 4 per cent of Net Income.

EXHIBIT C

SURPLUS ACCOUNT

For Twelve Months, Ended June 30, 1940

Surplus—June 30, 1939		$1,591,956.48
Add:		
Net Income for Twelve Months, Ended June 30, 1940	$1,518,792.27	
Contribution of Depreciation Expenses on Packard Automobile, Transferred to San Francisco Water Department	1,117.16	
Contribution from 1932 Hetch Hetchy Bond Fund for Four New Cottages at Early Intake	38,791.05	
Depreciation Expense on Buildings at Groveland	150.00	1,558,850.48
		$3,150,806.96
Deduct:		
Insulator Pins Transferred to San Francisco Water Department	$115.68	
Packard Automobile Transferred to San Francisco Water Department	3,942.89	
Contribution to Hetch Hetchy Water Supply for Bond Interest and Redemption (1939-1940)	1,644,249.14	
Adjustment for Depreciation Expense Prior to June 30, 1939, Account Sale of Copper Cable	18,190.38	
Contributions to Hetch Hetchy Water Supply for Buildings, Structures and Improvements, and Replacements and Reconstruction	3,065.71	1,669,563.80
Surplus, June 30, 1940		$1,481,243.16

COMPOSITION OF SURPLUS

June 30, 1940

Additions:		
Net Income, August 16, 1925, to June 30, 1940	$20,631,415.78	
Contributions from San Francisco Water Department	1,228.59	
Miscellaneous Additions to Surplus	3,179.49	
Contribution from 1932 Hetch Hetchy Bond Fund for Four New Cottages at Early Intake	38,791.05	$20,674,614.91
Deductions:		
Contributions to Hetch Hetchy Water Supply for Bond Interest and Redemption	$18,787,878.52	
Contributions to Hetch Hetchy Water Supply for Buildings, Structures and Improvements and Reconstruction and Replacements	12,666.45	
California Railroad Commission Evaluation of P. G. & E. Company's San Francisco Properties	392,006.43	
Miscellaneous Deductions from Surplus	820.35	19,193,371.75
		$1,481,243.16

HETCH HETCHY POWER DIVISION

EXHIBIT D

STATEMENT OF OPERATING EXPENSES—JUNE 30, 1940

	PRODUCTION	1939-1940 12 Months 7/1 to 6/30	1938-1939 12 Months 7/1 to 6/30
	OPERATION:		
6000	Superintendence	$9,317.48	$8,086.44
6005	Hydraulic Labor	12,762.39	12,631.79
6010	Station Labor	44,873.83	44,917.81
6015	Miscellaneous	5,997.15	5,734.48
6020	Supplies and Expenses	15,666.11	14,286.74
6030	Contributions to Retirement System	2,969.01	2,806.65
		$91,585.97	$88,463.91
	MAINTENANCE:		
6050	Structures	$22,529.30	$23,580.68
6055	Reservoirs, Dams and Intakes	6,076.31	5,862.39
6060	Waterways	1,045.62	2,722.89
6065	Forebays, Penstocks and Tailraces	1,771.00	2,725.00
6070	Roads and Trails	5,958.15	7,229.80
6075	Hydraulic Power Plant Equipment	3,563.67	4,286.77
6080	Miscellaneous Power Plant Equipment	2,465.70	2,805.70
		$43,409.75	$49,213.23

	TRANSMISSION	1939-1940 12 Months 7/1 to 6/30	1938-1939 12 Months 7/1 to 6/30
	OPERATION:		
6200	Superintendence	$2,834.55	$1,726.96
6215	Transmission Lines—Labor	8,790.00	9,104.63
6220	Transmission Lines—Supplies and Expenses	1,203.64	930.95
6225	Contributions to Retirement System	481.32	484.44
		$13,309.51	$12,246.98
	MAINTENANCE:		
6250	Transmission Structures	$446.62	$19.19
6255	Substation Equipment	2,586.12	3,793.51
6260	Towers and Fixtures	355.63	397.77
6265	Tower Line Conductors	2,251.45	890.45
6270	Poles and Fixtures	6,657.29	8,580.51
6275	Pole Line Conductors	825.88	499.19
6280	Roads and Trails	1,219.55	1,187.80
6285	Miscellaneous	1,466.73	546.88
		$15,809.27	$15,915.30
	MISCELLANEOUS:		
6290	Transmission Rents	$30.00	$27.23
	Total Transmission Expenses	$29,148.78	$28,189.51

MISCELLANEOUS:

6092	Communication System	$7,187.14	$7,167.14
6094	Hydrography	951.57	932.00
		$8,138.71	$8,099.14
	Total Production Expenses	$143,134.43	$145,776.28

ADMINISTRATIVE AND GENERAL

8000	Salaries and Wages	$9,021.02	$9,718.84
8005	Contributions to Retirement System	564.93	400.40
8010	Services of Other Departments	38,932.84	33,346.68
8011	Exhibits at Golden Gate International Exposition	0	5,000.00
8015	Professional Services	1,513.43	1,486.21
8020	Stationery, Office Supplies and Postage	167.62	616.25
8021	Sundry Office Expenses	23.45	0
8025	Telephone and Telegraph	150.40	244.86
8030	Traveling and Other Expenses	376.78	273.87
8040	Injuries and Damages	111.40	119.89
8051	Automobile Insurance Premiums	395.82	666.02
8055	Insurance	0	434.20
8061	Raker Act Litigation	10,221.33	7,756.86
8062	Williams Litigation	13.75	3,213.24
8063	Meridian, Ltd., Litigation	2,893.42	1,896.93
8064	Legal Expense—Transbay Construction Co. Suit	56.00	0
8095	Miscellaneous	38.57	0
8096	Maintenance Automotive Equipment	1,392.33	631.41
	Total Administrative and General Expense	$65,873.09	$65,805.66

FIXED CHARGES

9000	Interest Expense	$342,528.86	$354,438.00
9010	Rents (General)	15,000.00	12,500.00
9020	Taxes (Actually Paid)	4,318.07	4,075.46
9050	Depreciation Expense	304,842.78	301,718.41
	Total Fixed Charges	$666,689.71	$672,731.87

EXHIBIT E

HETCH HETCHY POWER DIVISION

COMPARISON OF ACTUAL REVENUES AND EXPENDITURES WITH BUDGET ESTIMATES

FISCAL YEAR 1939-1940

	Month of June, 1940			Twelve months to June 30, 1940		
	Budget and Modifications	Revenues Expenditures Accruals	Increase or *Decrease*	Budget and Modifications	Revenues Expenditures Accruals	Increase or *Decrease*
PRODUCTION EXPENSES Electric Generation—Hydraulic Power						
Operation	$7,939.08	$8,093.33	*$154.25*	$95,269.00	$91,585.97	$3,683.03
Repairs and Maintenance	3,556.33	5,028.48	*1,472.15*	42,676.00	43,409.75	*733.75*
Miscellaneous	714,17	2,286.08	*1,571.91*	8,570.00	8,138.71	431.29
Total Production Expense	$12,209.58	$15,407.89	*$3,198.31*	$146,515.00	$143,134.43	$3,380.57
TRANSMISSION EXPENSES						
Operation	$1,117.67	$1,150.19	*$32.52*	$13,412.00	$13,309.51	$102.49
Repairs and Maintenance	1,210.25	1,479.53	*269.28*	14,523.00	15,839.27	*1,316.27*
Total Transmission Expense	$2,327.92	$2,629.72	*301.80*	$27,935.00	$29,148.78	*$1,213.78*
Administrative and General Expense	$6,544.83	$7,467.23	*$922.40*	$78,538.00	$65,873.09	$12,664.91
Total Operating Expense, exclusive of Depreciation	$21,082.33	$25,504.84	*$4,422.51*	$252,988.00	$238,156.30	$14,831.70

FIXED CHARGES

Interest on Long Term Debt (Power Proportion)	$28,544.07	$28,544.07	.....	$342,528.86	$342,528.86	......
Fee to U. S. Government (Raker Act)	1,250.00	1,250.00	.....	15,000.00	15,000.00	......
Taxes	337.50	369.64	*32.14*	4,050.00	4,318.07	*268.07*
Total Fixed Charges	$30,131.57	$30,163.71	*$32.14*	$361,578.86	$361,846.93	*$268.07*
Bond Redemption (Power Proportion)	$21,508.33	$21,508.33	.....	$258,100.00	$258,100.00	......
Current Reconstruction and Replacement	3,415.92	4,158.77	*$742.85*	40,991.00	40,551.35	439.65
Buildings, Structures and Improvements	83.00	1,455.20	*1,372.20*	996.00	1,455.20	*458.20*
Bond Interest and Redemption (H. H. W. S. Issues)	137,020.76	137,020.76	.....	1,644,249.14	1,644,249.14	......
Total Hetch Hetchy Power Budget Estimate, 1939-40	$213,241.91	$219,811.61	*$6,569.70*	$2,558,903.00	$2,544,358.92	$14,544.08
Revenues:						
Power Sales	$199,166.67	$200,453.12	$1,286.45	$2,390,000.00	$2,412,423.25	$22,423.25
Other Income	833.33	987.79	154.46	10,000.00	11,215.03	1,215.03
Total Revenue	$200,000.00	$201,440.91	$1,440.91	$2,400,000.00	$2,423,638.28	$23,638.28
Receipts from Surplus	$13,241.91	$13,241.91	.....	$158,903.00	$158,903.00	......
	$213,241.91	$214,682.82	$1,440.91	$2,558,903.00	$2,582,541.28	$23,638.28
Net Saving on Budget Estimate			*$5,128.79*			$38,182.36

SCHEDULE No. 3

HETCH HETCHY POWER DIVISION

DETAIL OF INTERFUND BALANCES

June 30, 1940

		Order	Department Number	Controller's Number	Invoice Number	Detail	
						Debit	Credit
	INTERFUND ACCOUNTS—PUBLIC SERVICE ENTERPRISES						
3300	SAN FRANCISCO WATER DEPARTMENT						
	Telephone tolls January 1, 1940, to June 30, 1940	W. O.	967-19	1299	H.H.P. 6-130		$93.40
	Automobile Insurance Premiums H. H. P. O. pro rata for fiscal year 1939-1940.	W. O.	967-13	498	H.H.P. 6-135		395.82
							$489.22
3310	HETCH HETCHY WATER SUPPLY						
	Repair water buckets, Moccasin Powerhouse—Operating Fund	W. O.	967-24	2658	H.H.P. 6-127		$924.21
	Install armor rods on Transmission Conductors—Operating Fund	W. O.	967-14	667	H.H.P. 6-132		845.95
	Routine Transmission Maintenance January 1 to June 30, 1940—Operating Fund	W. O.	967-17 & 23	1337 & 2587	H.H.P. 6-133		6,017.59
	Routine Maintenance of Communication System January 1, 1940 to June 30, 1940—Operating Fund	W. O.	967-18 & 22	1338 & 2546	H.H.P. 6-134		4,413.43
	Refund of excess operating advance for fiscal year 1939-1940—Operating Fund				J.E. #6-43	$10,203.95	
						$10,203.95	$12,201.18
	Liability account uncompleted work orders 1939-1940 Reconstruction and Replacement Fund	W. O.	967-21	1677	J.E. #6-38		$2,263.93
	Total Public Service Enterprises					$10,203.95	$14,954.33

INTERFUND ACCOUNTS GENERAL—CITY AND COUNTY

3400	EMPLOYEES' RETIREMENT SYSTEM						
	Hetch Hetchy Power Division Employees' Retirement System Contributions, June, 1940	D. P.			H.H.P. 6-3		$279.84
	Hetch Hetchy Power Division Employees' Retirement System, Medical	D. P.			H.H.P. 6-6		5.00
							$284.84
3410	RECREATION DEPARTMENT						
	Electric energy month of May, 1940	S. O.	1782	509	H.H.P. 5-8	$78.93	
	Telephone tolls month of May, 1940	W. O.	1783	2462	H.H.P. 6-4	2.05	
	Electric energy month of June, 1940	S. O.	1812	562	H.H.P. 6-6	211.35	
	Telephone tolls month of June, 1940	W. O.	1813	2645	H.H.P. 6-22	5.55	
						$297.88	
3420	GENERAL FUND—BUILDING AND STREET LIGHTING						
	Electric energy bills at Livermore and Riverbank for month of April						$3.30
	Electric energy bills at Livermore and Riverbank for month of May						2.80
	Electric energy bills at Livermore and Riverbank for month of June						3.79
							$9.89
3450	GENERAL FUND—CASH RESERVE FUND						
	Temporary loan in anticipation of revenue C. C. T. V. #569, June 24, 1940				J.E. #6-32		$200,000.00
3460	ELECTRIC POWER BUREAU						
	Revolving fund items paid by H. H. P. O. Revolving Fund				J.E. #6-40	$34.81	
	Refund of excess operating advance for fiscal year 1939-1940				J.E. #6-44	792.28	
						$827.09	
	Total General City and County					$1,124.97	$200,294.73

SCHEDULE No. 1

HETCH HETCHY POWER DIVISION

ACCOUNT 1001 ELECTRIC PLANT IN SERVICE

JUNE 30, 1940

			Balance June 30, 1939	Gross Additions July 1, 1939-June 30, 1940	Retirements July 1, 1939-June 30, 1940	Adjustments July 1, 1939-June 30, 1940	Balance June 30, 1940	Accrued Depreciation June 30, 1940
1001-A		HYDRAULIC PRODUCTION PLANT						
	320	Land and Land Rights	$53,903.00	....	....	....	$53,903.00	0
	321	Structures and Improvements	842,351.00	....	....	....	842,351.00	$218,976.68
	322	Reservoirs, Dams and Waterways	6,609,814.25	....	....	....	6,609,814.25	1,616,154.58
	323	Water Wheels, Turbines and Generators	904,753.00	....	....	....	904,753.00	418,705.70
	324	Accessory Electric Equipment	128,546.00	$13,437.10	$13,437.10	....	128,546.00	76,137.62
	325	Miscellaneous Power Plant Equipment	17,352.00	....	....	....	17,352.00	10,207.20
	326	Roads, Railroads and Bridges	20,203.00	....	....	....	20,203.00	0
			$8,576,922.25	$13,437.10	$13,437.10	0	$8,576,922.25	$2,340,181.78
1001-B		TRANSMISSION PLANT						
	340	Land and Land Rights	$49,677.00	....	....	....	$49,677.00	0
	341	Clearing Lands and Rights of Way	38,212.00	....	....	....	38,212.00	0
	342	Structures and Improvements	18,880.00	....	....	....	18,880.00	$6,627.68
	343	Station Equipment	578,543.20	....	....	....	578,543.20	251,696.09
	344	Towers and Fixtures	872,767.00	....	....	....	872,767.00	320,708.28
	345	Poles and Fixtures	39,232.00	$361.35	$361.35	....	39,232.00	23,538.94
	346	Overhead Conductors and Devices	1,199,814.00	3,489.19	145,110.61	....	1,058,192.58	668,060.78
	347	Underground Conduit	657.00	....	....	....	657.00	394.56
	348	Underground Conductors and Devices	1,115.00	....	....	....	1,115.00	401.30
	349	Roads and Trails	0	....	....	....	0	0
			$2,798,897.20	$3,850.54	$145,471.96	0	$2,657,275.78	$1,271,427.63
1001-C		GENERAL PLANT						
	370	Land and Land Rights	$1,128.00	....	....	....	$1,128.00	0
	371	Structures and Improvements	697,666.49	$38,791.05	$13,331.00	....	723,126.54	$236,573.78
	372	Office Furniture and Equipment	4,766.66	....	1,161.66	....	3,605.00	3,605.00
	373	Transportation Equipment	18,111.05	....	3,942.89	....	14,168.16	7,316.83
	375	Shop Equipment	30,076.00	....	....	....	30,076.00	14,669.48
	377	Tools and Work Equipment	4,689.00	....	....	....	4,689.00	3,656.10
	378	Communication Equipment	0	329.79	329.79	....	0	0
	379	Miscellaneous Equipment	10,603.95	....	....	....	10,603.95	7,956.06
	395	Unclassified	363,405.84	....	....	....	363,405.84	0
			$1,130,446.99	$39,120.84	$18,765.34	0	$1,150,802.49	$273,777.25
			$12,506,266.44	$56,408.48	$177,674.40	0	$12,385,000.52	$3,885,386.66
		Schedule		No. 1A	No. 1A			No. 1B

SCHEDULE No. 1A
HETCH HETCHY POWER DIVISION
Gross Additions, July 1, 1939, to June 30, 1940

1001-A	HYDRAULIC PRODUCTION PLANT		
	324 ACCESSORY ELECTRIC EQUIPMENT		
	Voltage Regulator, Moccasin Powerhouse		$13,437.10
1001-B	TRANSMISSION PLANT		
	345 POLES AND FIXTURES		
	Poles, Crossarms, etc., 22 K.V. Transmission Line		361.35
	346 OVERHEAD CONDUCTORS AND DEVICES		
	Purchase and Installation of Lightning Arrestors, Priest, West Portal and Mather	$987.58	
	Porcelain Insulator Units in Transmission Line	2,501.61	3,489.19
1001-C	GENERAL PLANT		
	371 STRUCTURES AND IMPROVEMENTS		
	Four New Cottages, Constructed at Early Intake		38,791.05
	378 COMMUNICATION EQUIPMENT		
	Poles, Crossarms, etc., in Telephone Line		329.79
	Total Gross Additions		$56,408.48

SCHEDULE No. 1A—Continued
HETCH HETCHY POWER DIVISION
Retirements, July 1, 1939, to June 30, 1940

1001-A	HYDRAULIC PRODUCTION PLANT		
	324 ACCESSORY ELECTRIC EQUIPMENT		
	Retire Voltage Regulator, Moccasin Powerhouse		$13,437.10
1001-B	TRANSMISSION PLANT		
	345 POLES AND FIXTURES		
	Retire Poles, Crossarms, etc., 22 K.V. Transmission Line		361.35
	346 OVERHEAD CONDUCTORS AND DEVICES		
	Retire 604,531.0 Feet of 345000 C. M. Hemp Cored Copper Cable Stored at Millbrae and Sold to Charles Harley Company	$142,609.00	
	Retire Porcelain Insulator Units, in Transmission Line	2,501.61	145,110.61
1001-C	GENERAL PLANT		
	371 STRUCTURES AND IMPROVEMENTS		
	Retire Two Frame Cottages, Groveland	$151.00	
	Retire One Frame Barn, Groveland	151.00	
	Retire One 18 ft. x 55 ft. Frame Cottage, Early Intake	3,052.00	
	Retire Two 22 ft. x 40 ft. Frame Cottages, Early Intake	6,456.00	
	Retire One 22 ft. x 46 ft. Frame Cottage, Early Intake	3,521.00	13,331.00
	372 OFFICE FURNITURE AND EQUIPMENT		
	Retire Office Furniture and Equipment Transferred to H. H. W. S., June 30, 1940:		
	Venetian Blinds	$30.00	
	Cabinet Files	170.61	
	Carpet	304.97	
	Arm Chair	75.00	
	Side Arm Chairs	86.00	
	Costumer	12.50	
	Desk	210.80	
	Drapes and Cornices	57.65	
	Club Chair Sofa	90.13	
	Phone Stand	12.50	
	Table	83.50	
	Desk Trays	21.00	
	Waste Basket	7.00	1,161.66
	353 TRANSPORTATION EQUIPMENT		
	Retire Packard Automobile Transferred to San Francisco Water Department, March 6, 1940		3,942.89
	378 COMMUNICATION EQUIPMENT		
	Retire Poles, Crossarms, etc., in Telephone Line		329.79
	Total Retirements		$177,674.40

SCHEDULE No. 1B

HETCH HETCHY POWER DIVISION

RESERVE FOR DEPRECIATION ELECTRIC PLANT

June 30, 1940

Description	1 Value in Service	2 Cost of Removal	3 Salvage	4 Transferred to Other Departments	5 Net Debit to Reserve	6 Credits to Reserve	7 Credit Balance
Balance of Reserve—June 30, 1939 (Credit)							$3,692,789.31
Amount Credited to Reserve and Charged to Expense, Fiscal Year 1939-1940						$304,842.78	
Add: Depreciation Expense Adjustments, Prior Year						18,040.38	
Retirement of:							
604,531.0 feet of 345000 C. M. Hemp Cored Copper Cable, Stored at Millbrae, Sold to Charles Harlay Company	$142,609.00	....	$53,113.62	....	$89,495.38		
One Packard Automobile Transferred to San Francisco Water Dept.	3,942.89	....	....	$2,825.73	1,117.16		
Two Frame Cottages at Groveland One Frame Barn at Groveland	302.00	....	150.00	....	152.00		
One 18 ft. x 55 ft. Frame Cottage at Early Intake	3,052.00	....	....	....	3,052.00		
Two 22 ft. x 40 ft. Frame Cottages at Early Intake	6,456.00	....	....	....	6,456.00		
One 22 ft. x 46 ft. Frame Cottage at Early Intake	3,521.00	....	....	....	3,521.00		
Poles, Crossarms, etc., Transmission Line	361.35	$2,135.90	....	....	2,497.25		
Poles, Crossarms, etc., Telephone Line	329.79	2,108.96	....	....	2,438.75		
Porcelain Insulator Units, Transmission Line	2,501.61	4,564.04	....	....	7,065.65		
Voltage Regulator, Moccasin Powerhouse	13,437.10	932.04	....	....	14,369.14		
Office Furniture and Equipment, Transferred to Hetch Hetchy Water Supply	1,161.66	....	....	1,040.18	121.48		
Total Debits and Credits to Reserve, Fiscal Year 1939-40	$177,674.40	$9,740.94	$53,263.62	$3,865.91	$130,285.81	$322,883.16	192,597.35
Balance of Reserve, June 30, 1940 (Credit)							$3,885,386.66

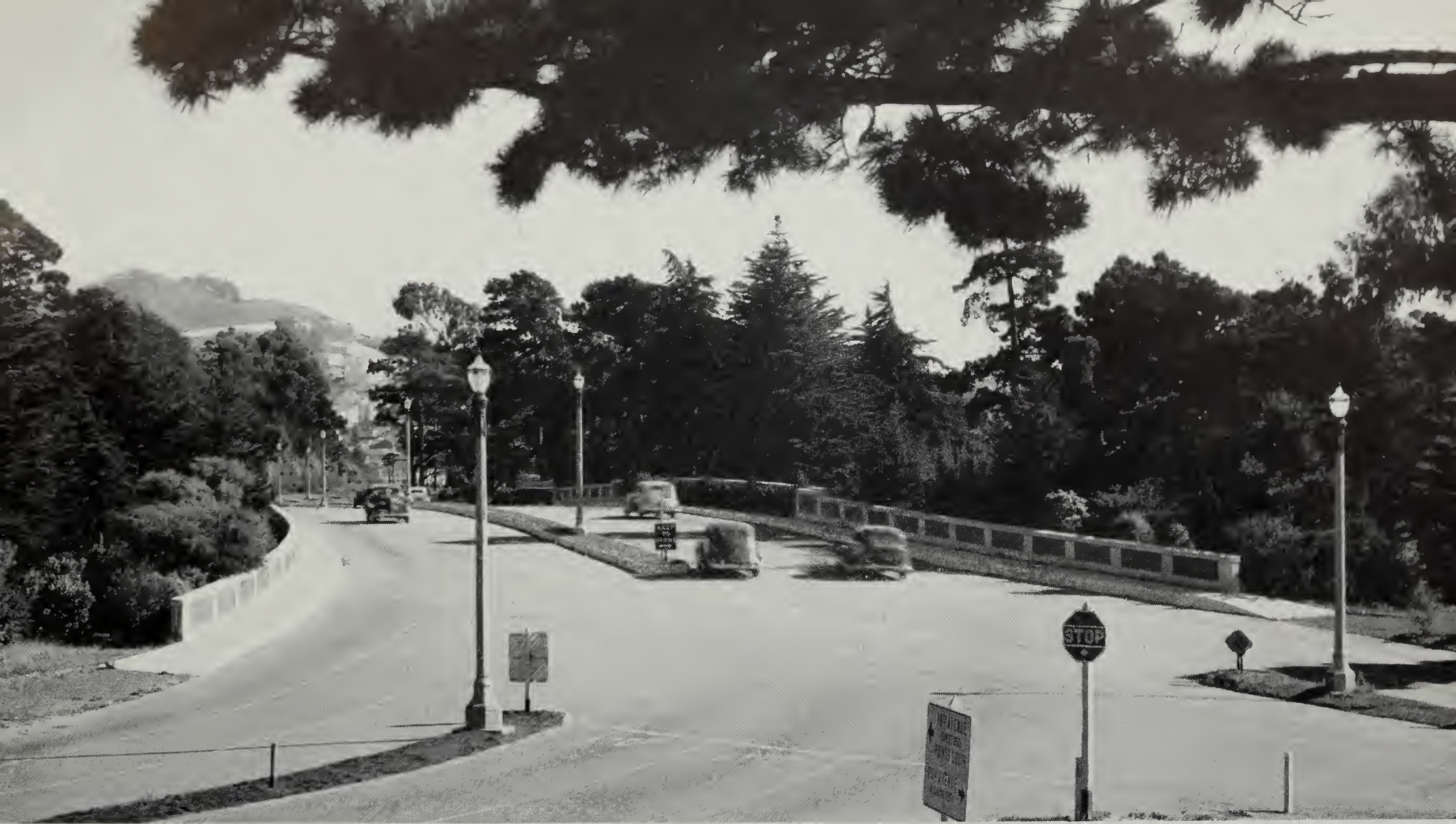
SCHEDULE No. 2

HETCH HETCHY POWER REPLACEMENT AND RECONSTRUCTION FUND

RECEIPTS AND DISBURSEMENTS

Fiscal Year 1939-1940

Balance—June 30, 1939				$207,372.26
Receipts During Year 1939-1940:				
Budget Appropriation, 1939-1940			$39,701.00	
Return of Temporary Loan to Hetch Hetchy Power Operative Fund, C. C. T. V. No. 386, February 14, 1940			75,000.00	114,701.00
				$322,073.26
Disbursements During Year 1939-1940:				
Replacement of Porcelain Insulator Units, Transmission Line	C. S. T. V.	039	$13,999.85	
Replacement of Wooden Cover with Metal Cover, Moccasin Powerhouse Sump	C. S. T. V.	040	326.56	
Replacement of Poles, Crossarms, etc., in 22 K. V. Transmission and Distribution Lines	C. S. T. V.	041	963.04	
Replacement of Poles, Crossarms, etc., in Telephone Lines	C. S. T. V.	042	799.30	
Replacement of Porcelain Insulator Units, Transmission Lines	C. S. T. V.	043	1,510.92	
Replacement of Voltage Regulator, Moccasin Powerhouse	C. S. T. V.	044	154.86	
Replacement of Parts of Ten Switches in Transmission Line	C. S. T. V.	045	3,734.10	
Replacement of Voltage Regulator, Moccasin Powerhouse	Warrant	3013	12,670.65	
Replacement of Poles, Crossarms, etc., in 22 K. V. Transmission and Distribution Lines	C. S. T. V.	051	1,247.53	
Replacement of Poles, Crossarms, etc., in Telephone Line	C. S. T. V.	052	1,189.42	
Replacement of Porcelain Insulator Units, Transmission Line	C. S. T. V.	053	7,065.65	
Replacement of Ties in Hetch Hetchy Railroad between Stevens Bar and Moccasin Spur	C. S. T. V.	054	557.56	
Replacement of Poles, Crossarms, etc., in Telephone Line	C. S. T. V.	058	1,249.33	
Replacement of Voltage Regulator, Moccasin Powerhouse	C. S. T. V.	059	546.37	
Replacement of Poles, Crossarms, etc., in 22 K. V. Transmission and Distribution Lines	C. S. T. V.	061	1,249.72	47,264.86
Treasurer's Cash Balance, June 30, 1940				$274,808.40



CENTER STRIP LIGHTING

Concrete standards in the roadway dividing islands light State Highway No. 1 where it crosses Golden Gate Park.

STREET AND PUBLIC BUILDING LIGHTING BUREAU

PAUL J. OST

Manager and Chief Engineer*

PAUL J. OST
Chief Electrical Engineer

This department began operations in 1932 when the Public Utilities Commission, under the new charter, assumed the responsibility for street lighting and for entering into contracts for heat, light and power for all municipal purposes

The functions of the department include in addition to the design, construction and operation of the street lighting system, the purchase of utility services for all departments of the city. The department therefore controls the yearly disbursement of approximately one and three-quarters million dollars of city funds.

These functions were under the management of Mr. Paul J. Ost until January, 1940, as a part of the Electric Power Bureau. Since the death of Mr. Ost the work has been done under the direction of the Manager of Utilities, Mr. E. G. Cahill. Mr. A. O. Olson, Electrical Engineer, has supervised the work, assisted by Mr. G. W. Dolen, in charge of street lighting, operation and maintenance; Mr. B. W. Grethel, in charge of street lighting design and construction, and Mr. B. A. Devine, in charge of gas and electric supply. Much of the credit for the efficient operation of the department must go to these men.

The year's expenditures for gas and electricity, and for street lighting, are shown in Table No. I. Special attention may be called to the administrative cost, which is but 1.23% of the total.

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*Deceased.

STREET LIGHTING

New lights are being attached to Municipal Railway trolley poles on Eleventh Street.

FOR RECREATION

Play area lighting in process of installation at James Rolph, Jr., Playground.

Street Lighting Operation:

Cooperating with the city administration's efforts to keep municipal expenditures at a minimum, the Public Utilities Commission has in the past refrained from making general lighting improvements.

In presenting its bid for furnishing street lighting services during 1939-1940, the Pacific Gas & Electric Company quoted rates approximately 5.5% lower than those then in effect, which had been used in preparing the budget estimates. This rate cut provided a surplus in the street lighting appropriation which it was thought well to apply toward long-wanted improvement of the general street lighting system.

During previous years many additions and betterments were made to the city's lighting system. All such betterments, however, were of a special nature to meet specific requirements on particular streets. This year witnessed the first major revision and modernization of the entire street lighting system since 1932.

A comprehensive survey was undertaken early in the fiscal year and improvements conforming to modern standards of illumination were planned for every street in need of better lighting.

The actual work of modernization was started late in 1939 and is now nearing completion. When the work is finished, 1,683 new lights will have been added to the system and 5,170 old-type lights replaced with new, modern units. Before the close of the fiscal year 843 of the new lights were installed and 3,372 old lights were modernized. Besides these general improvements, 505 new lights were installed in connection with special improvements and street reconstruction projects.

At the beginning of the fiscal year the street lighting system consisted of 22,028 lights, of which 18,713, or 85.02%, were owned entirely or in part by the Pacific Gas & Electric Company. The year closes with 23,376 lights in service, of which 19,930, or 85.26%, are wholly or partly company owned. Of the 1,348 lights thus added to the system, 1,217 are company owned, while 131 belong to the city.

Table II shows the street lighting cost for the year. For furnishing lighting equipment and for maintaining the entire system, as well as for the 27,000,000 KWH of electricity used by the lights, the company was paid $725,145.72. Replacements and repairs, as well as pole space rental for city-owned lights, brought the total cost to $727,167.60.

Table No. III is a resume of past years' street lighting costs. From this table it will be noted that the trend of the cost per lamp year is downward. The percentage of taxes spent for street lighting is likewise decreasing, although the number of lights is increasing year by year. These favorable changes have been brought about by two means:

1. In common with other utility rates, street lighting rates have been reduced.
2. By acquiring ownership of a portion of the street lighting system, it has been possible to eliminate fixed charges from the rate applied to 3,446 lights.

Street Lighting Construction:

All new lighting installations made during the year have been financed by the company, which has performed the work by contract in accordance with plans and specifications prepared by this department. Eight major street lighting jobs of this nature, costing $101,200, were completed during the year. Five additional installations are under construction and three will be undertaken next year.

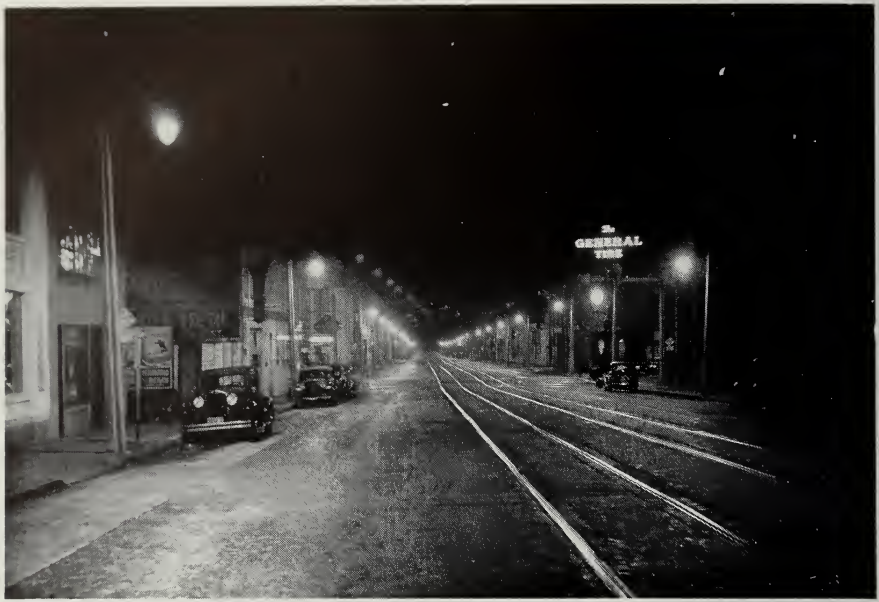
The W. P. A. Streets and Sidewalks Project has continued as in past years to install conduits for lighting in streets reconstructed by them. Most of these streets have been provided with new lights by the company. Proper allowance is being made for the use of the city-owned conduits in the rate charged for this type of construction.

Table No. IV is a summary of additions made to the city-owned street lighting system during the year, and shows that property valued at $95,139 has been acquired without capital outlay by the city, except for engineering and inspection of the installation. The W. P. A. installed 85,000 feet of conduit, 279 electrolier foundations and 185 pullboxes, the value of which is estimated at $80,690. Private property owners expended $14,449 for lights in connection with new street improvements as required under Ordinance No. 15.0611. During the year $11,659 in city funds were expended for street lighting improvements.

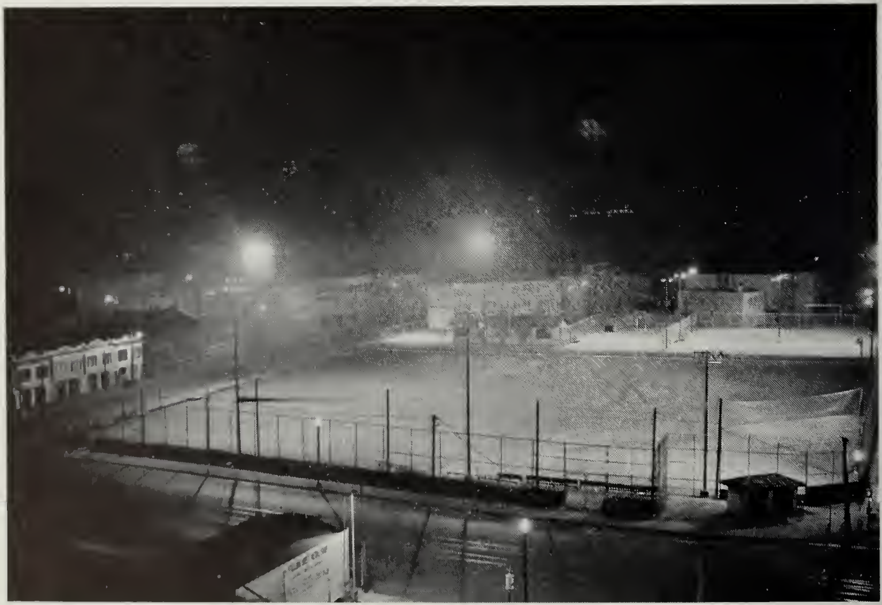
The above three items total $106,798 and added to the previously city-owned lighting system bring the value of this system to more than one million dollars. The acquisition of this plant by years is shown in Table V.

Included in this report are photographs of some of the new street lighting installations made during the year, of which the following merit special mention:

The Richmond approach to the Golden Gate Bridge was completed during the year and the main streets leading to this approach were relighted and equipped with 104 new 20-foot concrete standards, located in the dividing strip.



NIGHT VIEW OF ELEVENTH STREET
Taken after installation of new lights.



NIGHT VIEW OF JAMES ROLPH, JR., PLAYGROUND
A softball field, two tennis courts, a basketball court and a volleyball court are lighted with 72 1500-watt and 14 1000-watt floodlights.

Columbus Avenue, between Bay Street and Montgomery Street, was widened by the W. P. A., which also installed conduits and foundations for street lighting standards in connection with the widening work. This street was equipped with ninety-four 22-foot pendent standards with 6,000 lumen lamps.

Other major improvements completed during the year are briefly summarized below.

Location	Spec. No.	No. of Lights	Type of Electrolier
11th St.—Market St. to Division St.	44	4 7 51	22′ Metal 20′ Metal T. P. Brackets
Divisadero St., Waller St. to Clay St.	37	43 89	16½′ Concrete T. P. Brackets
Capp St., 15th St. to 26th St.	48	64	16½′ Metal
Townsend St., Embarcadero to 4th St.		24	20′ Metal
Howard St., Embarcadero to Beale St.	43	19	20′ Metal
Teresita Blvd., Verna St. to Rio Court		17	16½′ Metal
3rd St., Mission St. to Howard St.	25	13	22′ Metal
Army St., Harrison St. to Bryant St.	D.P.W.	12	20′ Metal
Miscellaneous Subdivisions		38	16½′ Metal or Concrete
Special Intersection Lighting		30	Pendent and Upright

Table No. VI shows improvements in the course of construction or planned for early installation.

Preliminary plans and estimate of the cost of a new lighting system for Golden Gate Park were prepared at the request of the Park Commission, which requested funds for this much needed improvement in the 1940-41 budget. These funds were denied in common with all other funds for street lighting construction.

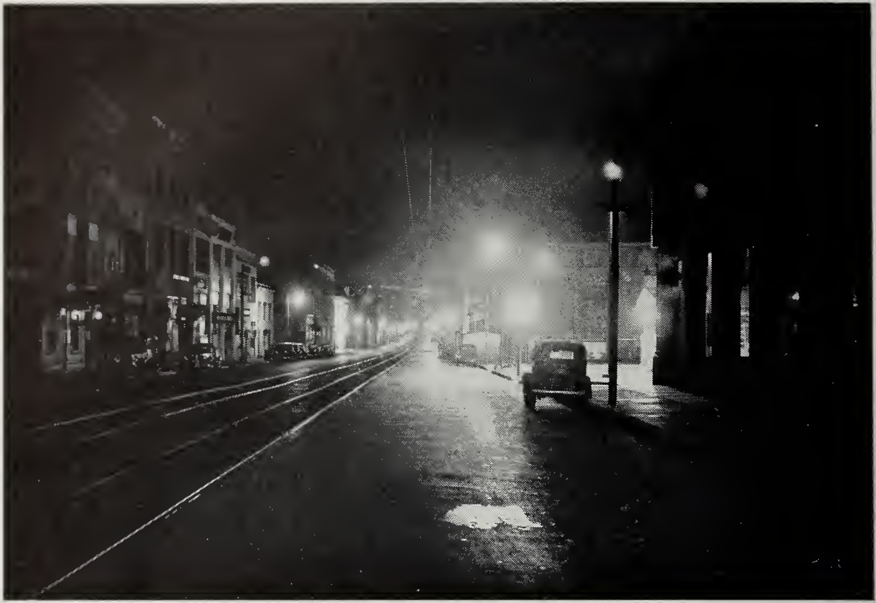
In cooperation with the Police Department and the San Francisco Junior Chamber of Commerce, an experiment in traffic safety lighting was undertaken. Special high intensity safety lighting was installed at four important intersections at which the night accident rate has been high. A total of 18 pendent luminaires with 10,000 lumen incandescent lamps were installed at the following intersections: Geary and Arguello Boulevards, Masonic Avenue and Fell Street, Bay Shore Boulevard and Silver Avenue, and Valencia and 16th Streets.

Also, as a traffic safety measure, the city-owned lighting system along Bay Shore Boulevard, Alemany Boulevard and Junipero Serra Boulevard was improved by changing the lamp sizes from 6,000 to 10,000 lumens, and by the addition of a total of 12 electroliers at important intersections. The midnight burning lights along Bay Shore Boulevard were ordered lighted until 2 A.M. in order to promote safety on this very important traffic arterial.

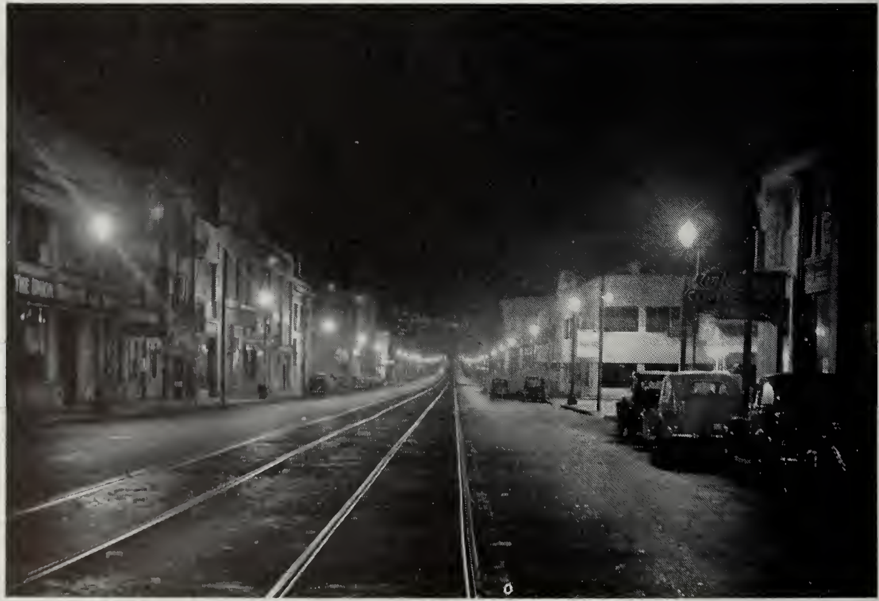
Through campaigns conducted by various organizations in an effort to promote traffic safety, considerable public attention throughout the nation has been focused on the need of better street and highway lighting.

Locally the Junior Chamber of Commerce, participating in this national organization drive for safety with light, has been very active. This activity has resulted in many demands for better lighting and in general has aided the efforts of this department in improving the city's lighting system.

In 1939, as well as in 1940, the San Francisco Junior Chamber of Commerce entered the national competition for achievement award in promoting safety with light, conducted in connection with the above-mentioned campaign, and had the gratifying experience of receiving 2nd award in 1939 and 1st award the following year. In the state competition which this year preceded the national competition, San Francisco placed 1st and was awarded the Clark White trophy.



HOWARD STREET
Shown before installation of new lighting system (note dark areas).



HOWARD STREET
Shown after installation of a new lighting system (note even distribution of light).

San Francisco therefore enjoys the enviable distinction of having made more valuable contributions in fostering safety by better lighting than any other city in the nation, and has still maintained a per capita expenditure for street lighting which is below the national average.

CLARK WHITE TROPHY
Awarded to San Francisco in the National Junior Chamber of Commerce Campaign for Safety with Light

Gas and Electric Supply:

During the year 556,504,800 cubic feet of gas and 69,114,142 K.W.H. of electricity were used for municipal purposes. For these commodities the city paid a total of $954,397,84. Table No. VII shows the quantities used by each department, as well as the cost thereof. This table also shows that gas is purchased through 376 accounts and electricity through 723 accounts. With the exception of two small electric accounts with the Modesto Irrigation District, all accounts are with the Pacific Gas & Electric Company.

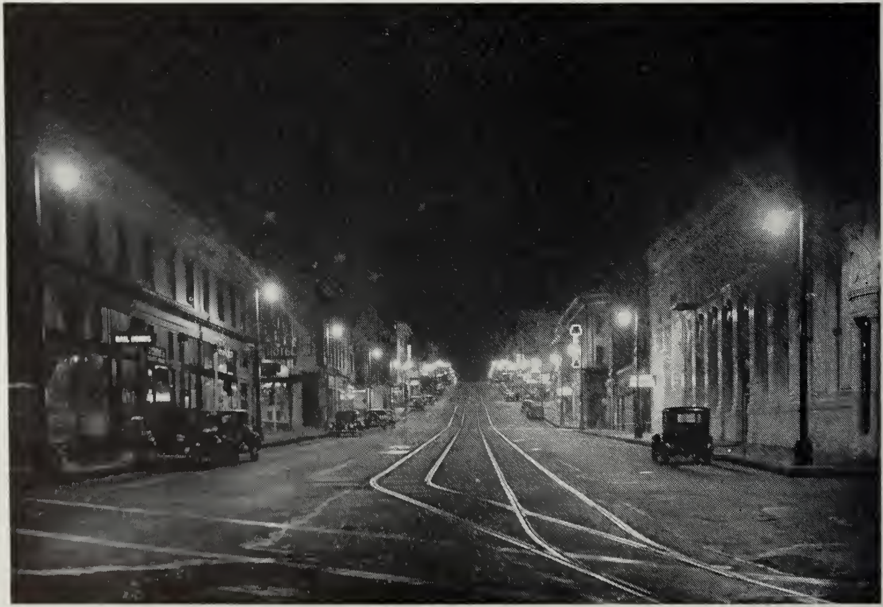
Tables VIII and IX show rate schedules applied to the accounts and the resulting average unit costs.

Our contract with the company permits the purchase of electricity within the city limits at 2¾ cents per K.W.H. for lighting and 2 cents per K.W.H. for power. It also permits the application of the public rate schedules to any account at the option of this department. Only published rate schedules apply to out-of-town accounts.

The city is allowed no special rate for gas and this commodity is therefore purchased under the regular published schedule.

The judicious application of the technical features of the gas and electric rates to the 1 099 accounts is one of the functions of this department. In order that the proper rate may be applied to each account, it is necessary to maintain a constant physical survey of all city premises. Exact data concerning meter location, type of service, connected load, operating cycle and load factor is required at all times in order to insure the most economical purchase of energy. Analyses of data obtained through periodic surveys often disclose avenues which lower costs by load combinations or other changes to the physical plant. Such cases are called to the attention of the department involved and changes are recommended with an offer to assist in the engineering of the work. In many cases where the department involved has lacked funds it has been possible for this department to finance the changes through funds appropriated by this department for such purposes.

DAY VIEW OF COLUMBUS AVENUE
The street has recently been widened and relighted with 94 pendent standards using 6000-lumen lamps.



NIGHT VIEW OF COLUMBUS AVENUE
Showing effects of installation of improved lighting system.

CENTER STRIP LIGHTING
Nineteenth Avenue through the Sunset district, part of State Highway No. 1, leading to Golden Gate Bridge.

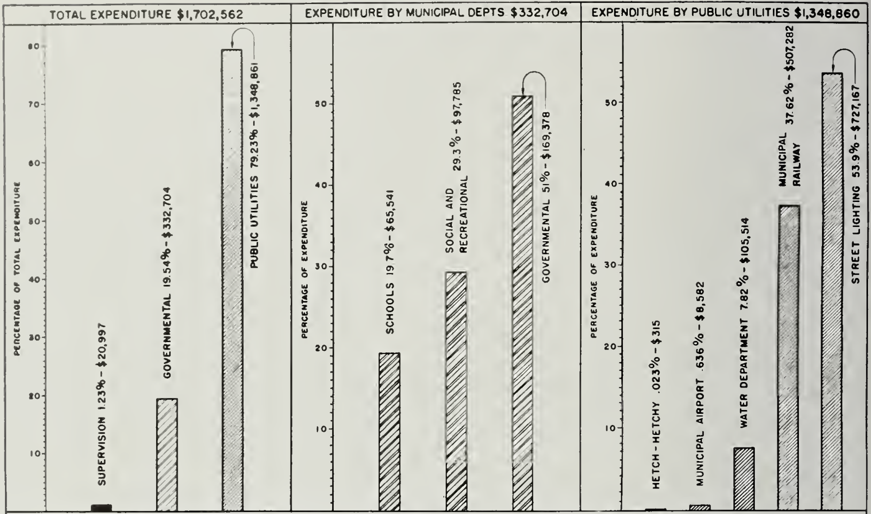
Actual operating data for seven cases where such changes were made during the last two years are now at hand and indicate that $8,772 per year is being saved as a result of an initial expenditure of $6,626.70. These cases are listed below.

Location	Cost of Change	Annual Saving
City Hall	$4,470.00	$4,296.24
Main Library	1,195.00	947.37
County Jail No. 2	327.00	907.09*
Veterans Building	40.00	1,141.29
Opera House	45.00	559.15
Water Department Building	550.00	537.33
Department of Public Works Yard	.....	27.35†

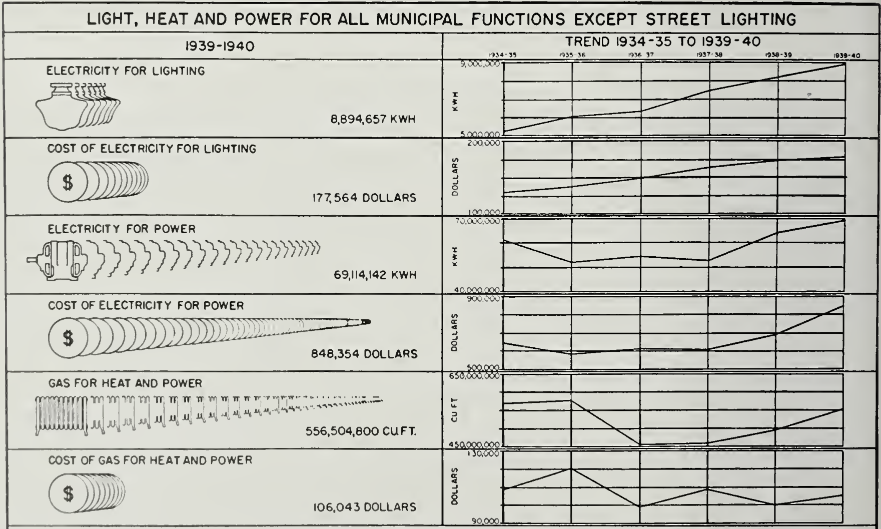
*10 months' experience.
† 5 months' experience.

Many other changes of this nature, equally lucrative, have been recommended but due to lack of funds or other reasons the departments involved have not availed themselves of the possible economies.

Owing to the fact that this department has no direct control of the usage of gas and electricity, it is difficult to anticipate the most economical schedule to be applied to the various accounts. It has therefore been necessary to arrange with the company to make retroactive bill adjustments possible. With the actual operating experience at hand at the close of the year, each account is analyzed and rebate is claimed in cases where the application of a different schedule would have resulted in a lower annual cost. By this procedure 73 accounts were rebilled at the close of the year, resulting in a net credit to the city of $3,505.84.



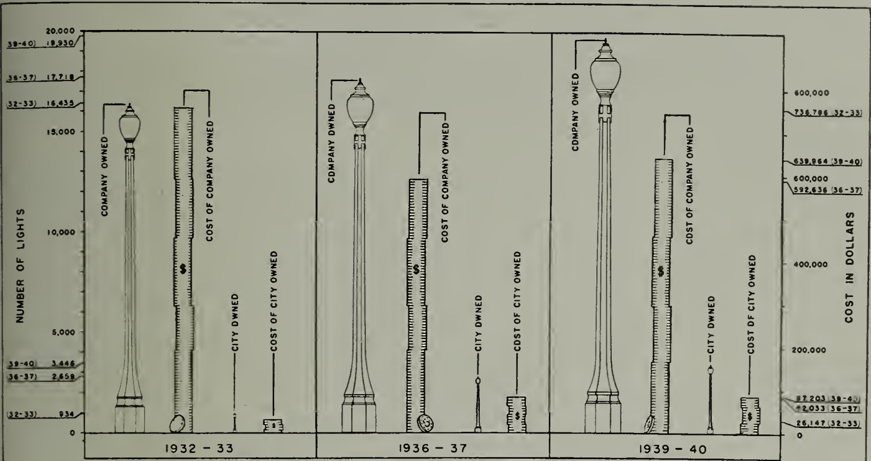
EXPENDITURES FOR GAS & ELECTRICITY DURING YEAR 1939-1940
SEGREGATED ACCORDING TO FUNCTIONS



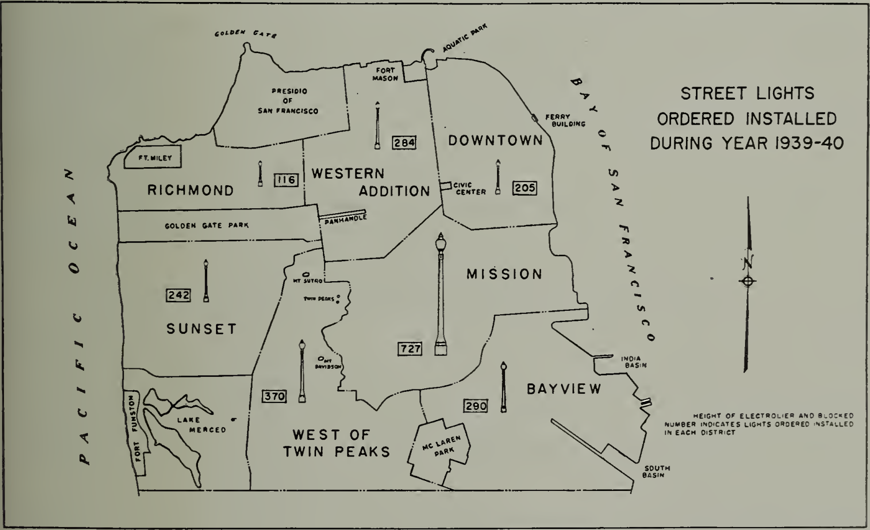
GAS AND ELECTRIC SUPPLY

The monthly control and check of all gas and electric bills resulted in a net credit of $1,139.67, as a result of billing errors. Meter errors corrected during the year resulted in rebates totaling $69.37.

The above credits and rebates total $4,714.88 and represent actual savings to the city in the form of lower cost of gas and electricity. Each individual item was credited to the overcharged department's account.



NUMBER OF COMPANY OWNED AND CITY OWNED STREET LIGHTS
AND THE RELATIVE ANNUAL COST OF OPERATION



STREET LIGHTS
ORDERED INSTALLED
DURING YEAR 1939-40

HEIGHT OF ELECTROLIER AND BLOCKED NUMBER INDICATES LIGHTS ORDERED INSTALLED IN EACH DISTRICT

During the year the Pacific Gas & Electric Company distributed funds held in escrow by court order pending final disposition of the disputed gas rate reduction ordered by the California State Railroad Commission in 1933. Overcharges plus interest, totaling $14,520.85, were refunded for gas furnished the city during the period July 16, 1933, to April 30, 1936, through 316 accounts.

In addition to the regular department bills the following miscellaneous utility charges were referred to this department for check and verification:

1. **For the Water Department.** Reimbursement of power charges for water pumping of 13 water right holders in south Alameda County, totaling $265.40.

2. **For Public Welfare Department.** Monthly gas and electric bills for 67 indigent relief clients, totaling $1,185.03 for the year.

3. **For W. P. A. Projects.** Bills for gas and electricity used on city sponsored W. P. A. projects, totaling $6,190.04 for the year. By analyses of the rates charged for these accounts, it was possible to claim a rebate of $487.56 and to apply more advantageous rate schedules to future bills.

Interdepartmental contacts in the interest of lower energy cost have often resulted in many requests for engineering services on allied subjects.

Thus a floodlighting system was designed for James Rolph Playground and the construction thereof was inspected for the Recreation Commission.

Likewise for the Recreation Commission a comprehensive floodlighting system for two baseball fields, four tennis courts and miscellaneous play areas at Funston Playground was designed. It is estimated that the installation of this system will cost $45,000 and will be undertaken, under the supervision of this department, as a W. P. A. project in the very near future.

The San Andres pumping plant, supplying water to the county jail in San Mateo County and to the Sharp Park Golf Course, was redesigned and the reconstruction thereof was inspected for the Park Department.

Other work of this nature performed during the year is briefly summarized below:

Department	Location	Nature of Work
Sheriff	County Jail No. 28	Plans and specifications for alterations to main switchboard.
Police Department	Hall of Justice	Survey and report on condition of wiring, and recommendation for lighting and air conditioning.
War Memorial Trustees	War Memorial Building	Plans, estimates and recommendations for floodlighting.
Recreation Commission	North Beach Playground	Plans and estimates for play area lighting.
Park Commission	Aquatic Park	Report on distribution of operating cost and main switchboard and service charges.
Park Commission	Corporation Yard	Plans and estimate for improved electric service.
Health Department	Hassler Health Home	Recommendations for gas and electric service to new construction.
Health Department	Laguna Honda Home	Survey and recommendations for improved and more economical X-ray service.
Health Department	San Francisco Hospital	Survey and recommendations for improved and more economical X-ray service.

The maintenance of good relations with other departments, as well as with the utility company, is of prime importance to this department in order that the best interests of the city may be served. Through efforts of the nature listed above, it has been possible to strengthen materially these relations and this department has therefore, during the year, had the gratifying experience of seeing its cordial relations with others enhanced.

TABLE No. I

1939-40 EXPENDITURES FOR GAS, ELECTRICITY AND STREET LIGHTING

Gas for Heat and Power	$106,108.34	
Electricity for Light and Power	850,524.79	
	$956,633.13	
Less Credits and Adjustments	2,235.29	
Net Gas and Electricity		$954,397.84
Street Lighting by Contract	$725,145.72	
Maintenance Work Not Covered by Contract	988.62	
Pole Space Rentals	1,033.26	
Total Street Lighting		$727,167.60
Administration		20,996.90
Total Expenditures for Street and Building Lighting		$1,702,562.34

TABLE No. II

COST OF STREET LIGHTING OPERATIONS, 1939-40

Contractual Service:		
Gross Street Lighting Expenses		$740,774.57
Less Market Street Railway Portion	$12,576.00	
Outages	3,052.85	15,628.85
Net Street Lighting		$725,145.72
Replacements and Repairs:		
Replacements and Repairs	$1,985.38	
Less Collection for Damage	996.76	988.62
Pole Space Rentals		1,033.26
Total Street Lighting Expenditures		$727,167.60

TABLE III

TABULATION OF STREET LIGHTING EXPENDITURES FOR THE LAST NINE YEARS

Fiscal Year	Amount of Appropriation	No. Lights at Close of Year	Total	Per Cent of Taxes	Avg. Cost Per Lamp Per Year	Construction
1931-32	$865,000.00	19,500	$855,289.34	...	$43.86	....
1932-33	850,000.00	17,369	762,933.84	3.10	43.93	....
1933-34	780,000.00	18,115	696,126.56	2.48	38.43	52,421.00
1934-35	766,000.00	20,383	698,701.94	2.32	34.28	43,109.99
1935-36	699,600.00	20,060	677,128.37	2.24	33.76	35,264.90
1936-37	728,000.00	20,576	674,869.86	2.15	32.79	218,029.50
1937-38	735,000.00	21,378	711,737.60	2.21	33.29	....
1938-39	735,000.00	22,028	728,786.00	2.18	33.08	9,630.73
1939-40	760,000.00	23,376	727,167.60	2.18	31.10	4,192.00
1940-41	760,000.00	.....	....	...	....	....

TABLE IV

NEW CITY-OWNED STREET LIGHT CONSTRUCTION COMPLETED DURING 1939-40

Location—	No. of Lights	Financed by—	Value
Installed by Real Estate Subdivisions:			
Geneva Terraces	9	Tract Owner	$3,713.00
McLaren Park Terrace	3	Tract Owner	1,117.00
Miraloma Park	8	Tract Owner	3,180.00
Paramount Terrace	2	Tract Owner	695.00
Sherwood Forest	5	Tract Owner	1,668.00
Teresita Boulevard	17	Tract Owner	3,185.00
35th Avenue	2	Tract Owner	756.00
Yerba Buena Avenue	1	Property Owners	135.00
	47		$14,449.00
Installed by City Contract:			
Yerba Buena Avenue	1	St. and Bldg. Lighting Bureau	$105.00
Alemany Boulevard	7	St. and Bldg. Lighting Bureau	2,085.00
Sloat and Junipero Serra Blvds.	5	St. and Bldg. Lighting Bureau	2,002.00
Otsego Street	1	Board of Education	395.00
Army Street	12	Dept. of Public Works	4,805.00
19th Avenue	Cross Conduits only	Dept. of Public Works	1,262.00
Park-Presidio Blvd.	Cross Conduits only	Dept. of Public Works	1,005.00
	26		$11,659.00
Installed by W. P. A.:			
Golden Gate Park By-Pass Road	16	W. P. A. and St. and Bldg. Lighting Bureau	$5,600.00
Townsend Street	24	W. P. A.	10,168.00
Union and Calhoun Streets	6	W. P. A.	1,452.00
Capp Street	Conduit and Foundations only	W. P. A.	12,600.00
Columbus Avenue	Conduit and Foundations only	W. P. A.	12,700.00
Harriet Street	Conduit and Foundations only	W. P. A.	610.00
Post Street	Conduit and Foundations only	W. P. A.	4,100.00
Divisadero Street	Conduit and Pullboxes only	W. P. A.	18,300.00
11th Street	Conduit and Pullboxes only	W. P. A.	8,300.00
Eureka Street	Conduit only	W. P. A.	6,350.00
Sherman Street	Conduit only	W. P. A.	360.00
Bernal Heights Blvd.	Cross Conduits only	W. P. A.	150.00
	46		$80,690.00
Grand Total	119		$106,798.00

TABLE V

INVESTMENT IN CITY-OWNED STREET LIGHTING BY YEARS

	City Funds		Federal Funds		Property Owners	Total
	D. P. W.	P. U. C.	W. P. A.	P. W. A.		
Before January 1, 1932......	$141,707	......	......	......	$17,908	$159,615
January 1, 1932-July 1, 1932.	36,622	......	......	......	......	36,622
Fiscal Year 1932-33.........	30,110	......	......	......	......	30,110
1933-34.........	48,391	......	......	......	......	48,391
1934-35.........	102	$96,811	......	......	6,545	103,458
1935-36.........	8,072	14,114	$11,553	......	6,819	40,558
1936-37.........	24,500	180,850	47,321	$18,444	16,269	287,384
1937-38.........	14,083	61,301	77,212	......	12,414	165,010
1938-39.........	12,096	6,792	33,525	......	22,965	75,378
1939-40.........	7,072	10,353	75,380	......	13,993	106,798
Total, July 1, 1940......	$322,755	$370,221	$244,991	$18,444	$96,913	$1,053,324

TABLE VI

NEW STREET LIGHTING PLANNED OR ORDERED INSTALLED

Street	No. of Lights	Type of Electroliers
Howard Street—		
3rd Street to 14th Street....................	102	20′ Metal
Harriet Street—		
Howard Street to Folsom Street............	3	22′ Metal
Post Street—		
Mason Street to Van Ness Avenue...........	62	22′ Metal
Van Ness Avenue to Pierce Street...........	63	16½′ Concrete
Polk Street—		
McAllister Street to Post Street.............	51	22′ Metal
2nd Street—		
Market Street to Howard Street............	17	22′ Metal
4th Street—		
Howard Street to Townsend Street..........	34	20′ Metal
9th Street—		
Market Street to Division Street............	46	20′ and 22′ Metal
Aquatic Park	59	16½′ and 20′ Concrete

TABLE VII

DEPARTMENTAL GAS AND ELECTRICITY

CONSUMPTION AND EXPENDITURES, 1939-40

CONSUMPTION					EXPENDITURES					
Electricity		Gas								
No. of Accts.	KWH	No. of Accts.	Cubic Feet	Department	Electric	Gas	Total	Credits and Adjustments	Depart-mental Transfers	Total
4	372,141	3	3,584,200	Airport	$7,319.12	$1,262.89	$8,582.01	......	......	$8,582.01
7	422,126	1	38,400	Auditorium	7,114.88	29.25	7,144.13	+$69.52	—$1,541.29	5,672.36
3	54,394	1	299,400	Detention Home	1,249.52	156.56	1,406.08	......	......	1,406.08
4	75,006	..	....	DeYoung Museum	1,641.83	......	1,641.83	......	......	1,641.83
5	67,808	2	829,000	Dept. of Electricity	1,433.23	392.49	1,825.72	......	......	1,825.72
61	429,235	95	23,469,900	Fire Department	11,553.86	11,105.39	22,659.25	2.95	......	22,656.30
24	686,300	23	332,947,000	Health Department	14,379.91	50,105.52	64,485.43	73.77	......	64,411.66
5	155,750	..	....	Legion of Honor	3,141.75	......	3,141.75	35.20	......	3,106.55
26	521,112	23	3,131,100	Library	10,425.02	1,623.36	12,048.38	89.49	......	11,958.89
13	44,609,295	3	1,065,800	Municipal Railway	506,869.80	487.72	507,357.52	75.47	......	507,282.05
81	2,618,556	21	13,182,300	Park Department	42,051.46	3,621.66	45,673.12	370.90	+1,596.14	46,898.36
65	246,734	13	3,620,100	Police Department	11,686.47	1,762.07	13,448.54	103.05	+ 322.55	13,668.04
35	1,100,669	6	1,525,300	Public Works Department	17,918.54	635.00	18,553.54	202.36	......	18,351.18
9	108,960	3	1,087,800	Purchasing Department	2,457.25	510.73	2,967.98	......	......	2,967.98
12	1,860,963	..	....	Public Buildings Department	26,449.57	......	26,449.57	+ 22.20	+1,541.29	28,013.06
58	299,535	27	1,558,900	Recreation Department	7,328.68	1,034.34	8,363.02	35.70	......	8,327.32
3	6,456	2	5,900	Registrar	177.61	18.32	195.93	......	......	195.93
238	2,606,877	135	13,495,800	Schools	57,961.26	7,881.06	65,842.32	300.99	......	65,541.33
3	674,920	3	28,356,600	Sheriff	10,625.80	5,320.62	15,946.42	......	—1,918.69	14,027.73
2	1,068,200	3	14,876,900	War Memorial	17,797.80	3,101.46	20,899.26	720.00	—6,989.78	13,189.48
..	....	..	....	Art Museum	......	......	......	......	+6,989.78	6,989.78
53	11,061,519	10	112,736,800	Water Department	88,879.37	16,756.91	105,636.28	121.89	......	105,514.39
4	64,880	2	693,600	Public Welfare Department	1,693.92	302.99	1,996.91	142.64	......	1,854.27
8	2,706	..	....	Hetch Hetchy	368.14	......	368.14	52.60	......	315.54
723	69,114,142	376	556,504,800	Total	$850,524.79	$106,108.34	$956,633.13	$2,235.29	......	$954,397.84

TABLE VIII

PURCHASE OF ELECTRICITY BY SCHEDULES

For Lighting and Miscellaneous Use

Schedule	No. of Accounts	KWH	Cost	Cost per KWH
$0.0275	335	1,191,455	$32,770.26	$0.0275
L-1	70	2,059,371	49,423.99	.0240
L-3	1	82	5.81	.0709
L-4	2	15,368	559.83	.0364
L-5	1	23,978	809.07	.0337
L-6	13	122,590	4,709.46	.0384
L-21	1	66	7.70	.1167
L-34	4	113,742	1,451.44	.0128
L-35	2	8,442	244.27	.0289
C-1	16	4,536,973	72,379.71	.0160
C-6	2	733,977	13,383.40	.0182
D-1	4	21,442	366.94	.0171
D-5	3	7,878	225.73	.0287
D-6	5	18,850	491.81	.0261
DA-6	2	26,105	547.09	.0210
D-21	1	12	6.23	.5192
D-w	1	14,326	181.54	.0127
Total	463	8,894,657	$177,564.28	$0.01996

For Power

Schedule	No. of Accounts	KWH	Cost	Cost per KWH
$0.02	200	1,553,077	$31,051.14	$0.0200
P-1	8	165,990	3,070.84	.0185
P-2	1	20	40.79	2.0395
P-3-13	9	1,426,792	19,235.93	.0135
P-7	2	226,600	5,066.92	.0224
P-9	1	44,428,620	503,660.51	.0113
P-15	12	2,333,208	34,788.14	.0149
P-17	1	17,606	255.51	.0145
P-30	1	9,846,400	65.361.24	.0066
H-1	10	221,172	3,096.55	.0140
	245	60,219,485	$665,627.57	$0.01105
Special	15	....	$5,162.92	......
Total	723	69,114,142	$848,354.77	$0.01227

TABLE No. IX

PURCHASE OF GAS BY SCHEDULES

For General Use

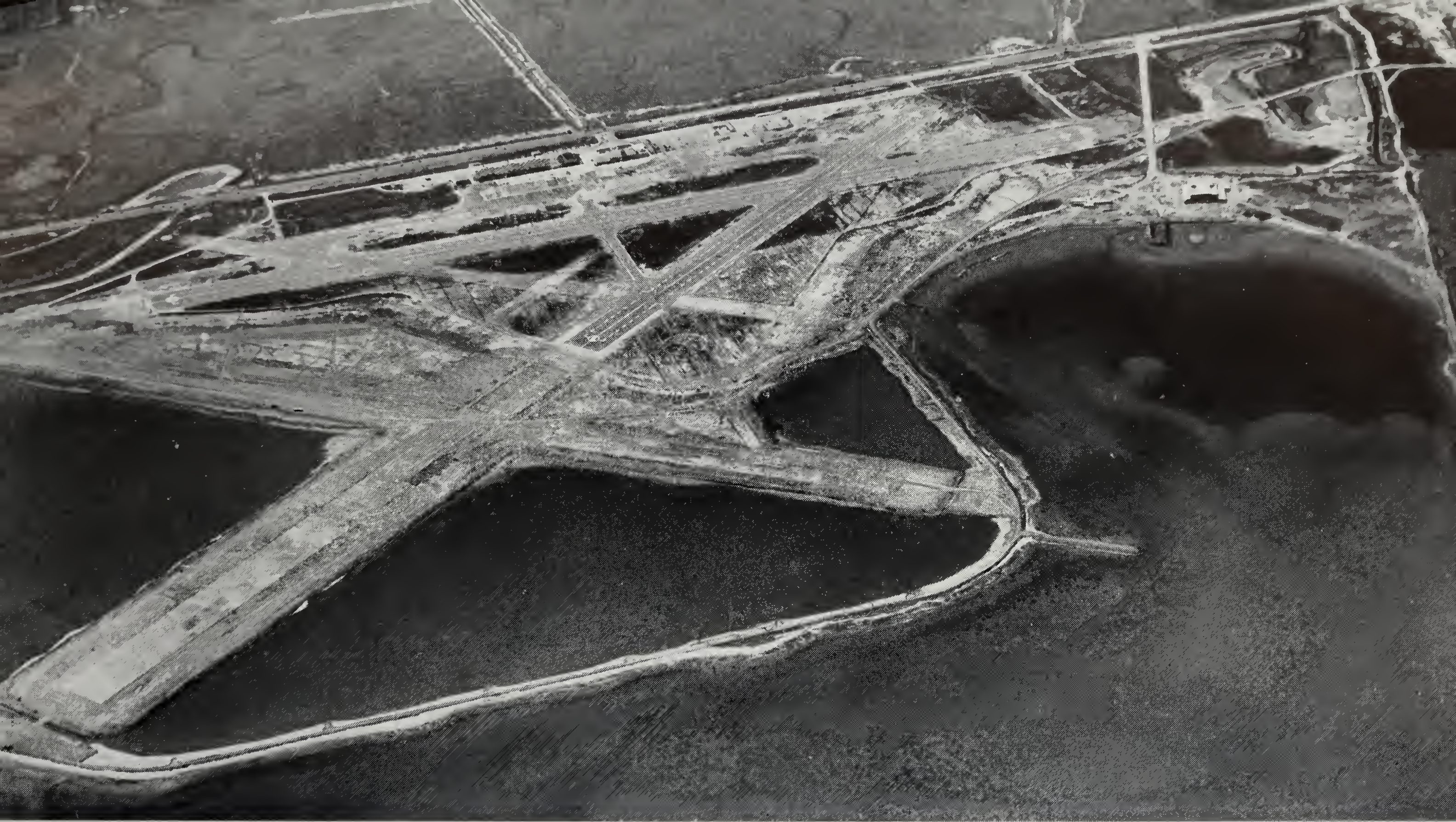
Schedule	Number of Accounts	Cubic Feet	Cost	Cost per 100 Cu. Ft.
G-1	294	38,083,800	$19,976.40	$0.0525
G-2	9	3,293,000	1,560.80	.0474
G-7	1	165,000	118.76	.0720
	304	$41,541,800	$21,655.96	$0.0521

General Heating

Schedule	Number of Accounts	Cubic Feet	Cost	Cost per 100 Cu. Ft.
GH-1	60	48,724,400	$17,443.14	$0.0358
GH-2	4	14,141,600	3,812.25	.0270
	64	62,866,000	$21,255.39	$0.0381

For Special Heat and Power

Schedule	Number of Accounts	Cubic Feet	Cost	Cost per 100 Cu. Ft.
GS-1	5	426,074,000	$58,500.30	$0.0137
GS-2	1	26,023,000	4,331.42	.0166
Special	2	....	300.00	.....
	8	452,097,000	$63,131.72	$0.0140
Total	376	556,504,800	$106,043.07	$0.0191



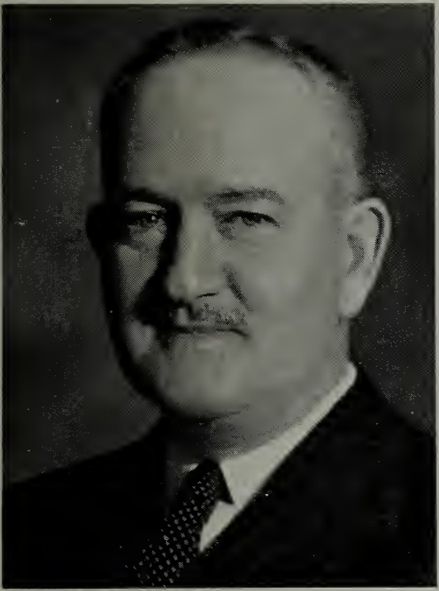
AIRPORT EXPANSION

Progress view at end of fiscal year showing reclamation of tidelands and construction of Coast Guard Air Station at San Francisco Municipal Airport. Runway fingers in foreground have been extended and partially paved in past year. Financed by $2,850,000 bond issue.

SAN FRANCISCO AIRPORT

B. M. DOOLIN

Manager



B. M. DOOLIN
Manager, San Francisco Airport

Foreword

A review of air transport activity at San Francisco Airport for the 1939-1940 fiscal year shows not merely a series of great increases over the previous year, but a series of all-time highs for operations conducted since the airport was inaugurated in 1927. Considering airline passenger totals, it is found that each month of the fiscal year showed a great increase over the same month of the previous year, and each month, except December and January, established a new record for the month concerned. The December and January exceptions were months when general weather conditions caused an appreciable number of schedule cancellations. The 12-month total was 126,546 passengers in and out of the airport, an increase of *60 per cent over last year, and an increase of 50 per cent over the highest year on record. Arrivals and departures of transport planes totaled 17,797, an increase of *43 per cent over last year; air mail cargo "off and on" totaled 1,315,311 pounds, an increase of *21 per cent, and air express cargo "on" totaled 178,448 pounds, an increase of *45 per cent. Express cargo "off" is not weighed at the airport.

In private flying operations as distinguished from airline activity, landings and takeoffs at San Francisco Airport totaled well over 100,000 during the 12-month period, and were increasing with great rapidity as the year was brought to a close, due principally to the Civilian Pilot Training Program of the Civil Aeronautics Authority.

Considering the United States as a whole it is found that great increases in air transport activity have taken place. Figures published by the Civil Aeronautics Authority show that 94,410,255 miles of scheduled flying were recorded during the fiscal year, an increase of 28 per cent over the previous year. Revenue passengers totaled 2,176,803, an increase of 58 per cent.

(*Percentages necessarily based on 9 months of operations, since airline schedules were greatly curtailed during March, April and May of the previous year while runway resurfacing was in progress.)

Fundamental Reasons for Surge in Air Traffic:

From both local and national air transport figures, it is evident that the surge in air traffic confidently predicted by followers of the aviation industry has arrived. The increases are of magnitudes which stamp them as a major advance in an industry which has just reached maturity. Furthermore, the increases are based upon sound foundations. There are fundamental reasons for their occurrence, reasons which differentiate them from mere seasonal uptrends.

First among these reasons is perhaps the remarkable safety record established by the airlines of the nation during the past 15 months. From March 26, 1939, to the end of the current fiscal year on June 30, 1940, not a single accident occurred which caused even serious injury to passengers or crews. During this period 2,629,945 passengers were carried, and 116,172,120 miles were flown. Passenger-miles flown totaled 1,029,726,129. Such a record is unequalled in the annals of any form of scheduled transportation

A second reason for the surge in air traffic is the world wide attention being focused today on the hitherto inadequately appreciated value of aviation. People in every walk of life have awakened to the importance and power of air transportation, both in national defense and world commerce. Round-the-world travel is a routine matter. Powerful nations look to the airplane as their chief means of defense. Countries considered of remote distances from one another have suddenly become close neighbors. The manufacture and sale of small flivver type planes is advancing with great strides, and the government guarantees that the number of licensed pilots in the United States will have reached 72,000 by the end of 1941, although indications are that this figure will be closer to 100,000. Air traffic control has become a major problem at the larger airports near centers of population.

There is another fundamental reason for this great advance in aerial activity, one which is somewhat elusive so far as statistics are concerned. It is the fact that the generation of young men and women just reaching maturity have for years been thoroughly air minded. They have enthusiastically welcomed the government's Civilian Pilot Training program, and their enthusiasm has given great impetus to flying in all of its branches.

United Air Lines to Establish Western Division Headquarters At San Francisco Airport:

The past fiscal year at San Francisco Airport has witnessed not only a great surge in air traffic, but also one of the most important announcements that the airport has ever known. On January 23, 1940, the officials of United Air Lines Transport Corporation made public a decision to move the company's Western Division Headquarters to San Francisco Airport, the move to be made as soon as hangar, office, and shop facilities can be constructed. A plot of ground near the northwest corner of the airport property has been selected for the airline base, which will bring some 500 employees and an annual payroll of $1,300,000 to San Francisco Airport. All administrative and maintenance activity west of Denver will be handled at the new quarters, including a complete maintenance base for the fleet of new 4-motored transports to be put into use next year.

As the fiscal year is brought to a close the officials of United Air Lines and members of the Public Utilities Commission are working out the details of a 20-year lease for the new headquarters The move will take place during the summer months of 1941.

WHERE THEY LIVE
Officers and enlisted men's quarters of the United States Coast Guard Air Station at San Francisco Municipal Airport.

OBSERVATION PLATFORM
Part of the newly completed enlisted men's quarters of the United States Coast Guard at the Municipal Airport.

The far reaching effect of this development can not be over emphasized, taking into account not only the initial advantages to be gained by San Francisco Airport and the community in general, but also the magnitude of airline expansion that is certain to come.

Airport Development Project Forges Ahead:

In last year's annual report, mention was made of a project whereby 300 acres of tide flats were being reclaimed along the east boundary of the airport, which would more than double the size of the present landing area, proper. The contract for placing 1,200,000 cubic yards of earth and rock fill in this area, comprising 42 per cent of the reclamation project, was completed during the winter months of the past fiscal year, and at the close of the year on June 30, the new runway sections of this fill had been brought to grade and made ready for actual surfacing. Necessary sub-drains have been installed in this section, and preparations have been made for reclaiming the balance of the area by pumping processes. The project will double the length of the prevailing wind runway, making it 6,000 feet long, and provide two new cross runways 4,500 feet and 4,000 feet long.

On the present landing field proper the paved runways and taxiways have been outlined with 18-inch white lines, and a plan for striping, lining, and marking the runways has been adopted to assist in air-traffic control. The plan has won praise from government officials, airline executives, and aircraft pilots in general.

Additional areas within the field boundaries have been graded, sub-drained, and made available for aircraft use.

An underground, duplicate, electric power supply line, with provision for automatic switchover in cases of power failure of either main feeder, has been installed between the airport and the South San Francisco plant of the Pacific Gas & Electric Company.

U. S. Coast Guard Base Nearing Completion:

At the new seaplane harbor adjacent to the airport on the north, being constructed as a part of the major development project, the U. S. Coast Guard is scheduled to begin operations within the next few months. A contract let by the U. S. Treasury Department in the amount of $513,000, for buildings and appurtenances at the site, is nearing completion. It will provide hangar, shop, wharf and ramp facilities, administrative offices and barracks for 60 men.

Of the 620 acres of land and water area comprising the seaplane harbor section of the airport property, 20 acres were deeded to the Coast Guard for their permanent base. The harbor has ample area set aside for other operators as the demand for seaplane base facilities increases. In this regard it is of interest to note that the Civil Aeronautics Authority in conjunction with the National Youth Administration has a seaplane base development program well under way throughout the United States, which will result in the establishment of 300 seaplane bases. Although these facilities will be small in design and of low cost, they are being fostered due to the interest which is rapidly developing in this type of flying and the possibilities it provides. In commenting on the project the Civil Aeronautics Journal states, "Completion of the program will make seaplane operations feasible from coast to coast and from border to border. . . . The facilities now being installed should form the nucleus for the future establishment of a completely adequate Nation-wide system of seaplane bases for the safe and convenient operation of water flying aircraft."

Radio Range Facility at San Francisco Airport to be Improved:

A low-powered radio range facility was installed for use at San Francisco Airport during the year, but was found to be inadequate for the type of airline operation in effect at this field. Negotiations were immediately carried forward to secure a range of greater power, and although the vast network of radio ranges currently in use along the airways of the Nation leaves practically no frequency available for new installations, the Civil Aeronautics Authority has advised that due to the heavy transport activity at San Francisco Airport a range will be moved from a less important station to this airport in the near future. It will be temporarily installed on San Mateo Point, 4 miles southeast of the airport. The radio range system of the United States is marked for complete revision within the next year or two, with installation of the newly developed "ultra high frequency" stations. As soon as this equipment is made available, a permanent installation will be made at San Francisco Airport, using a 40-acre plot of bay property already purchased for this purpose. It is located 3½ miles east-southeast of the airport, in a direct line with the 6,000 foot prevailing wind runway. As stated in last year's report, all easements for a causeway, light and water mains, power and communications lines to the site have been secured.

With installation of a radio range facility, transport operations can be carried on under lower ceilings than at the present time. Much less interruption in schedules will result, with consequent increase in efficiency and higher traffic figures.

To work in conjunction with the radio range a "blind landing beam" will be installed as soon as this new facility is brought to perfection and officially put into use by the Civil Aeronautics Authority. After much research and experimental work, the Authority is now installing a few such facilities on a trial basis. The perfected beam, which will permit landings under conditions of zero ceiling and visibility, will no doubt be in common use within the next two years.

San Francisco Airport Exhibit at 1940 Exposition:

At the Golden Gate International Exposition, being conducted for a second year at Treasure Island, a San Francisco Airport exhibit is included in the Public Utilities group of the San Francisco Building. The pictures, graphs, and tabulated data of last year have been supplemented with additional features of interest, one of which is a radio loud speaker which broadcasts the actual conversations taking place between the control tower operators at the airport and aircraft pilots in flight. A leased wire runs from the airport control tower to the exhibit at the Exposition, and all radio conversations are carried instantaneously to visitors "listening in" at Treasure Island. Another interesting addition to the exhibit is an "airline clock" which indicates at a glance not only the current time but also the hour at which one would arrive at various destinations throughout the country if he were to fly there by air.

Pan American Airways at Treasure Island:

The operations of Pan American Airways at Treasure Island, San Francisco's second airport of the future, have been greatly expanded during the fiscal year,

CRASH BOAT DOCK
The Coast Guard at San Francisco Municipal Airport is equipped with a "crash boat" for use in case of emergency landing or accident of aircraft on adjacent waters.

due principally to preparatory work for the inauguration of scheduled air service between San Francisco and New Zealand. This service is to start on July 12, 1940, with a mail flight over the new 8,008 mile route. The course to be followed will be via Los Angeles, Honolulu, Canton Island, and New Caledonia, with termination at the City of Auckland, New Zealand. At this latter city is located one of the world's finest harbors either for sea going vessels or flying clippers. At the termination of the fiscal year on June 30, extensive preparations for service over this route were complete, with bases established at the four stopping points and destination, and with all survey flights having been carried out. On June 12, 1940, a certificate of convenience and necessity to operate the route with mail, passengers, and express was granted Pan American Airways by the Civil Aeronautics Authority of the United States. Initial flights will carry only mail cargo, with the first passenger flight scheduled for September 7, 1940.

This major step in the expansion of scheduled transoceanic air commerce is the product of 30,000,000 miles of overseas flying by Pan American Airways, drawing on marine air experience in the Caribbean, the waters of South America, and the Atlantic and Pacific oceans. Through San Francisco it will link the American continents with the vigorous new trade area of the Antipodes, which boasts of a volume running more than two billion dollars a year with other parts of the world. The country of New Zealand itself has a trade with the world amounting to more than five hundred million dollars a year, and has the highest per capita foreign trade of any country in the world. Australasia ranks as the fourth most important trading area for the United States.

Statistics released by Pan American under date of June 30, 1940, show the following impressive figures:

Pacific Division:

Scheduled flying completed on the North Pacific (San Francisco to Hawaii, the Philippines, and the Orient)	3,541,790 miles
Number of passengers carried	5,306
Mail carried	332,494 pounds
Number of letters carried (conservative estimate, based on 40 letters to the pound)	13,299,760
Express carried	103,320 pounds

Entire Pan American Airways System:

Miles of airways in use (55 countries and colonies)	65,000
Passengers carried on entire system	1,511,680
Passenger-miles flown on entire system	590,772,214
Plane miles flown	107,752,408

At the port of the Trade Winds on Treasure Island the Pan American Airways base was visited by an estimated 2,500,000 people during the 1939 Golden Gate International Exposition. Again during 1940 the operations of the giant 41-ton clippers, together with an elaborate aeronautic display in the large Pan American hangar are proving major attractions for thousands of Fair visitors daily.

NATIONAL AERONAUTICAL PROGRESS

In the national field the aviation industry has enjoyed the most impressive development of its history. In its three principal branches—scheduled flying, private flying, and aircraft production—a series of all time high records have been established, the increases of which show staggering percentages for a nation-wide industry. The figures for each branch will be set forth under a separate paragraph.

Scheduled Airline Operations (Domestic Air Carriers):

	Fiscal Year 1939-1940	Percentage Increase Over Previous Year
Revenue miles flown	94,410,255	28%
Revenue passengers carried	2,176,803	58%
Revenue passenger-miles flown	852,489,488	54%
Express pound-miles flown	5,972,465,456	23%

In the field of scheduled flying the most impressive factor worthy of consideration is the safety record mentioned in the Foreword section of this report. Up to the close of the fiscal year on June 30, 1940, no accident involving even serious injury had occurred on the airlines of the nation for over 15 months. The date of March 26, 1940, marked the completion of one full year of such safe operation, and this fact was dramatically brought to the attention of the nation by two congratulatory messages, one from President Roosevelt to Chairman Robert H. Hinckley of the Civil Aeronautics Authority, and the other from the heads of the Authority to all airline, Authority, and Weather Bureau personnel. The messages are printed herewith:

(From President Roosevelt to Chairman Hinckley)

"My dear Bob:

"The news that our domestic airlines will on March 26 complete an entire year of flying without a single fatal accident is indeed gratifying. Will you please extend my heartiest congratulations to every last employee of the airlines—be he field boy, pilot, or president—and to your own personnel of the Civil Aeronautics Authority.

"I am deeply impressed by the reports submitted to me showing that during the year now closing our domestic airlines have flown 87,325,145 revenue plane-miles; carried 2,030,000 passengers, flown 814,906,250 passenger miles, a truly remarkable aggregate. Looking behind this record, in which we can all take such pardonable pride, we find it has been achieved through cooperation and team work between the personnel of the air transport lines and workers in the Federal Government. I trust that this cooperation may continue with like satisfactory results through the years ahead.

FRANKLIN D. ROOSEVELT."

(Message from the heads of the Civil Aeronautics Authority, dispatched at 3:50 A.M. on March 26, 1940, over 30,000 miles of C.A.A. teletypewriter circuits)

"Notam (Meaning 'notice to Airmen')

Heartiest congratulations to all airline, Civil Aeronautics Authority, and Weather Bureau personnel upon completion of an entire year of airline safety. This is one of the outstanding achievements in the history of transportation.

(Signed)

ROBERT HINCKLEY,
Chairman C. A. A.
CLINTON HESTER,
Administrator C. A. A.
TOM HARDIN,
Chairman Air Safety Board."

Extensive Operations of Airline Service Under American Flag:

As of January 1, 1940, American operated airlines were flying 85,000 miles of routes, over half of which were territorial and foreign. An airline map of these services would show a vast network of airways running to all sections of the United States, and extending north into Canada, south to Argentina and Chile, east to Europe, and west to the islands of the Pacific, the South Seas, and the Orient. The principal cities of Alaska are likewise linked by American operated airlines, providing schedules which require only a few hours flight which by other means of transportation in these regions would require months.

As of June 30, 1940, the number of miles of Federal Airways in the United States had reached 28,745, an increase of 19 per cent over the figure of a year ago. With completion of the 1940 program and the 1941 proposed program this figure will have reached 26,720 miles, and the entire system will be completely equipped with the most modern air navigation facilities.

Foreign Airline Service to be Expanded:

In the foreign airline service conducted by United States operators, a new trans-Atlantic run is being organized by the American Export Airlines, Inc. The airline will be subsidiary af American Export Lines, Inc., and plans to operate

COAST GUARD HANGAR

Here is headquarters for the Guard's air patrol which keeps a watchful eye over Coastal and Central California waters.

4-motored "Sikorsky" flying boats in non-stop service across the North Atlantic. At the present time Pan American Airways provides the only scheduled trans-Atlantic air service.

As regards trans-Pacific service an announcement has been made that daily service between San Francisco and Honolulu is being planned for about one year hence. Landplanes rather than seaplanes will be used over the route, and the operating company will be a subsidiary of both Pan American Airways and Inter Island Airways, the latter being an airline operating at present between the islands of the Hawaiian group.

Private Flying Statistics:

	1939	Increase Over 1938
Miles flown in private flying................	177,868,157	39%
Passengers carried	1,594,086	1%
Passengers carried for "pleasure"...........	432,794	25%
Miles flown per accident....................	81,778	19%
Miles flown per fatal accident...............	916,846	22%

	June 30, 1940	Increase Over June 30, 1939
Civil aircraft pilots holding licenses.........	*41,006	57%
Number of civil aircraft....................	14,359	18%

(*1,242 of this number held airline transport licenses.)

Civilian Pilot Training Program:

The Civilian Pilot Training Program, which charges the Civil Aeronautics Authority with the responsibility of training 50,000 new civilian pilots by June 30, 1941, has progressed with such remarkable success during the past year that almost 58,000 new civilian pilots will actually have been trained by the stipulated date one year hence. On June 30, 1940, the program had turned out 9,810 new pilots, taken from 435 colleges and universities and 75 noncollege communities. And even before these students had received their licenses, another group of 15,980 college students had started training in the summer program to be completed by September 1, 1940. Two more groups of some 16,000 each will be trained during the 1940-1941 school year. At least 5% of the total students trained must be of noncollege classification, but in actual practice during the past year the number amounted to about 7%.

In addition to this primary training, which brings the student to the "private pilot" grade, the Authority has a secondary training program planned for the coming year, in which about 9,000 of the primary course graduates will be given added flight training in larger planes comparable to Army trainers.

The fact that this entire program has given great impetus to private flying in general is indicated by the aircraft production statistics for 1939, which show that of the 3,715 civil aircraft manufactured, 3,114 were of the "light plane" class, carrying 1 or 2 persons. These planes are of lowest price and lowest operating cost.

California Leads in Private Flying:

The State of California continues its impressive lead in the realm of private flying, as indicated by the following statistics published by the Civil Aeronautics Authority as of June 30, 1940:

As of June 30, 1940:	Number of Aircraft (Excluding Gliders)	Number of Pilots (*Excluding Airline)	Number of Airports
California	1,442	5,664	186
Nearest Rival	1,166 (New York)	3,216 (New York)	151 (Texas)
Total for U. S. and Territories	14,359	39,764	†2,345
Per cent of Total Represented by Calif.	10%	14%	8%

---

*California has 162 airline transport pilots, 13% of the nation's total.
†No territories included except Alaska.

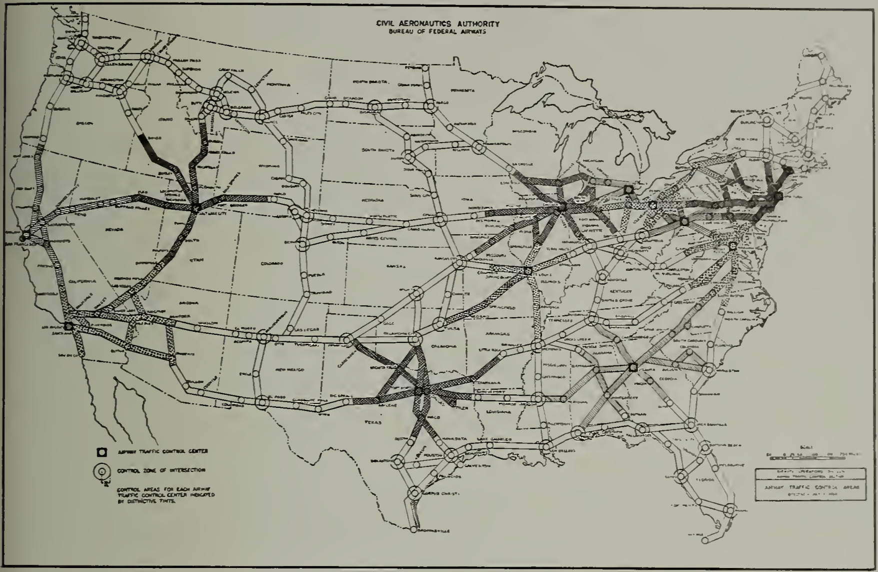
Aircraft Production:

Following are the latest available aircraft production statistics:

	1939	Increase Over 1938
Number of aircraft manufactured for domestic civil use	3,715	104%

The wars abroad and our own national defense program have, of course, put aircraft factories on capacity bases of operation. It must be borne in mind that the above figures are for "domestic civil aircraft," and do not include the great numbers of aircraft turned out for military purposes.

As regards the expansion of factory facilities for future production, gigantic figures have been made public by various firms, one of which states that in less than a year's time it can provide facilities for turning out 1,000 planes a day.

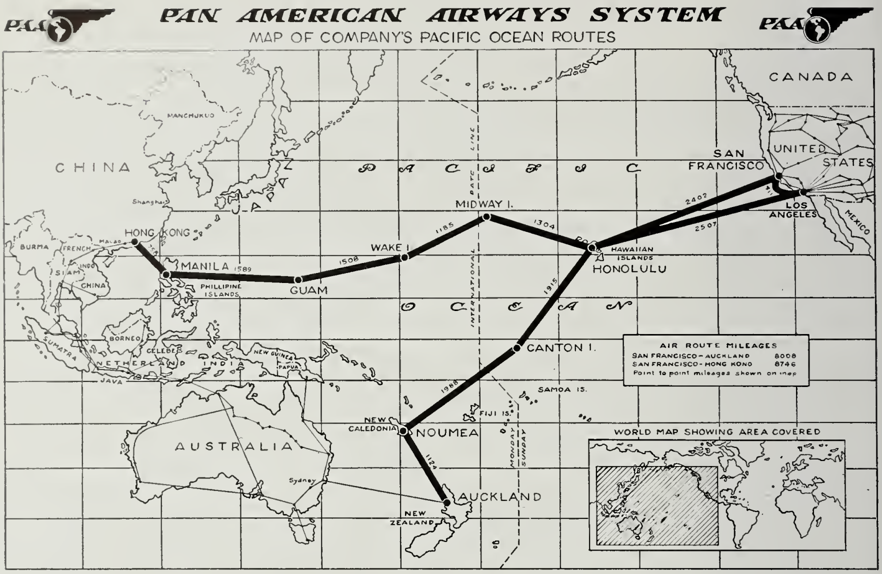

CIVIL AERONAUTICS AUTHORITY
BUREAU OF FEDERAL AIRWAYS
AIRWAY TRAFFIC CONTROL CENTER
CONTROL ZONE OF INTERSECTION
CONTROL AREAS FOR EACH AIRWAY TRAFFIC CONTROL CENTER INDICATED BY DISTINCTIVE TINTS.

Civil Aeronautics Authority Reorganized:

On June 30, 1940, Reorganization Plans No. III and IV of the Reorganization Act of 1939 became effective and brought about changes in the organization, powers and duties of the Civil Aeronautics Authority. Since the passage of the Civil Aeronautics Act of 1938 the Civil Aeronautics Authority had been an independent agency composed of a five-member Authority, an Administrator, and a three-member Air Safety Board. Under the new Plans the five-member Authority is termed the Civil Aeronautics Board. Its functions have been changed somewhat and have been placed within the framework of the Department of Commerce, although all of these functions are to be exercised with complete independence of the Secretary of Commerce. The Administrator is now known as the Administrator of Civil Aeronautics. The functions of this office have been transferred to the Department of Commerce, and are exercised by the Administrator under the direct supervision of the Secretary of Commerce. The Air Safety Board has been abolished and its functions have been consolidated with the functions of the new Civil Aeronautics Board.

TRANSPORT TRAFFIC AT SAN FRANCISCO AIRPORT

In the field of transport airline operations, which is the backbone of the aviation industry, San Francisco Airport ranks high among the leading air terminals of the nation. In an Airline Traffic Survey for the month of August, 1939, which is the only comprehensive work of its kind ever completed, the Civil Aeronautics Authority shows that San Francisco ranks seventh in the nation in airline passenger activity.



The two transport airlines operating at this terminal—United Air Lines Transport Corporation and Transcontinental & Western Air, Inc.—are considered major airlines of the world. They are the only transport airlines operating in northern California. The revenue miles flown by these two lines during the 1939-1940 fiscal year totaled 33,818,855 which is 36% of the total revenue miles flown by all the domestic airlines of the United States.

As of June 30, 1940, the schedules of the United Air Lines at San Francisco Airport provide 33 arrivals and 33 departures daily. Routes from this field run north to Vancouver, B. C., south to San Diego and east to New York and Philadelphia. Other routes of United operate from Salt Lake City to Spokane and Portland, from Denver to Cheyenne, and from Omaha to Lincoln.

Transcontinental & Western Air provides one departure daily to Phoenix, Arizona, and one arrival from that city. Several intermediate stops are made enroute, one of which is at Boulder City, where connection is made with the airlines' transcontinental run between Los Angeles and New York. Other routes operated by T. W. A. are from St. Louis to Detroit, and from Chicago to Dayton.

Era of Four-Motored Transports Inaugurated:

In June, 1940, this airline set a precedent among the domestic airlines of the nation by inaugurating the service of 4-motored "Stratoliners." These huge 21-ton transports, carrying 33 passengers and a crew of 5, are now in regular service between Los Angeles and New York. The company has a petition pending with the Civil Aeronautics Authority, requesting permission to extend its New York to Los Angeles route on to San Francisco Airport. If the request is granted, the "Stratoliners" will be operated into this field. At the present time all eastbound

"Stratoliner" passengers are routed by way of Los Angeles, flying south from San Francisco Airport via United Air Lines.

United Air Lines has ordered a fleet of 4-motored Douglas DC4 transports to be put into service in 1941. These craft weight 32½ tons, and carry 42 passengers and a crew of 5.

Many airline passengers frequenting San Francisco Airport are trans-Pacific air travelers. The fact that Pan American Airways provides trans-oceanic service at Treasure Island makes San Francisco an important link between the landplane and seaplane services of the West.

San Francisco Airport Traffic Figures:

The air traffic tabulation for San Francisco Airport during the past two fiscal years is set forth in an adjoining table of this report. The figures shown therein are impressive indications of the rapidity with which air transportation is forging ahead, and of the great need for continued vision in planning airport facilities of the future.

It will be noted that percentage increases over last year can not be made for the 12-month period as a whole, due to the fact that operations were greatly curtailed for 56 days during March, April and May of 1939 while construction work was in progress. Therefore a separate line of 9-month totals has been placed at the bottom of the tabulation and offers a basis on which to compare the airline operations of the past two fiscal years.

Although each group of figures—planes, passengers, mail and express—show a great advance over last year, it may be pointed out that the increases would have been even more pronounced if San Francisco Airport were equipped with a radio range facility. As mentioned previously in this report, the airport management has recently been assured by the Civil Aeronautics Authority that an adequate range will soon be installed at this air terminal, culminating negotiations that have been forcefully carried forward during the past several years. In the absence of a range facility the airlines must operate in and out of the field under "contact," high ceiling, minimums. Therefore many schedules are cancelled during "instrument" weather, which would have operated if a range were available.

LOCAL FLYING

In private flying activity as distinguished from scheduled transport activity at San Francisco Airport, great strides have been made during the past year. The advance is largely a result of the Civilian Pilot Training Program, the flight training of which began at this field during the Spring months of 1940. Not only did the program bring 30 students to the airport, each of whom received some 50 hours of flying time within a period of about three months, but the interest which it created in general brought many other students to the airport for training. It also brought renewed interest to pilots who had previously earned their wings. At the close of the fiscal year local flying had increased to such an extent that additional personnel had to be stationed in the traffic control tower, and traffic regulations were becoming ever more rigid. Landings and takeoffs were totaling some 600 daily, and were destined to mount rapidly with stepping up of the summer and school year classes of the Civilian Pilot Training Program.

Classification of Locally Based Aircraft:

The 42 airplanes based at San Francisco Airport as of June 30, 1940, may be divided into the following classifications according to the purposes for which they are used:

17	Private use only
16	Flying school training
*4	Aircraft dealers' demonstrators
†2	Charter trips and scenic flights
2	Flying clubs
1	Skywriter
42	Total

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*Three airplanes classed under flying school training also used as dealers' demonstrators.

†One airplane classed under dealers' demonstrators and 15 under flying school training also used for charter trips and scenic flights.

Airplanes for Private Use:

Continued improvement in the speed, comfort and safety features of planes used for private purposes has been brought about during the past year. Owners of such craft at San Francisco Airport use their planes for both business and pleasure, taking them on frequent flights to outlying ranches and resorts, and using them as time savers in making business trips to various sections of the country. The planes vary in size from small 2-passenger ships to those of 10 and 12 passenger capacity. Their speeds range from about 90 miles an hour to some 200 miles an hour.

Frank W. Fuller, Jr., Wins 1939 Air Classic:

Frank W. Fuller, Jr., whose list of record breaking flights up to June 30, 1939, was included in last year's report, has added two important records during the year. Both were made in the 1939 Bendix Transcontinental Race held on September 2nd. He flew his Seversky monoplane from Los Angeles to Cleveland in 7 hours, 14 minutes, breaking the Bendix record made by him in 1937 by 40 minutes. He continued on to New York, covering the coast-to-coast distance in 8 hours, 58 minutes, again breaking his own Bendix record of 1937, this time by 23 minutes. Average speed to Cleveland was 282 miles an hour, and for the coast-to-coast distance, 273 miles an hour.

Flying Schools:

Flying schools in operation at San Francisco Airport as of June 30, 1940, were as follows:

Name	Flying Equipment Used
Civilian Flying, Inc. (Successor to Summit Flying School)	2 Fleets, 1 Luscombe
Lyon Air Service	1 Waco, 1 Ryan S-T-A, 2 Luscombes, 1 Cub
ASA Airways	2 Stinson 105s, 2 Luscombes
Clyde Preston	1 Rearwin
Paul San Martino	1 Luscombe, 1 Travelair

Aircraft Dealers:

A list of the aircraft agencies located at San Francisco Airport as of June 30, 1940, is as follows:

Name	Representing
Mouton & Clyde, Inc.	Beechcraft Airplanes Luscombe Airplanes RCA Radio Equipment
Frank W. Fuller, Jr.	Gruman Amphibian Airplanes
Lyon Air Service	Piper Cub Airplanes Ryan Airplanes
Stinson Flying Company	Stinson Airplanes

Charter Trips and Scenic Flights:

Service by specially chartered plane to any part of the United States and nearby countries is available at San Francisco Airport during any hour of the day or night. Reliable operators offer rapid service to cover all types of emergencies, with equipment of various seating capacities and speeds.

Local scenic flights over the San Francisco Bay area, and particularly over the Golden Gate International Exposition, are decidedly popular. Eighteen airplanes are available at San Francisco Airport for this recreational service.

Flying Clubs:

Two groups of San Francisco Airport fliers have organized themselves into "flying clubs" to gain the various advantages that come from this type of organization. One such advantage is that hours in the air may be built up at a very reasonable expense, much more so than if each pilot were to rent or buy a plane individually. The San Francisco Flying Club has been in existence for several years at this field. Its members operate a 3-place Fairchild cabin plane. The Cooperative Flying Club was organized during the past year, and operates a 2-passenger open Fairchild.

Skywriter:

Cloudless skies over San Francisco frequently become the background for printed smoke signs, placed there by the skillful maneuvering of a specially built plane owned and operated by Thor Polson of San Francisco Airport. The pilot, known to his friends as "Smokey" Polson, is probably the dean of American fliers from the standpoint of years of service. His flying career dates back to 1910.

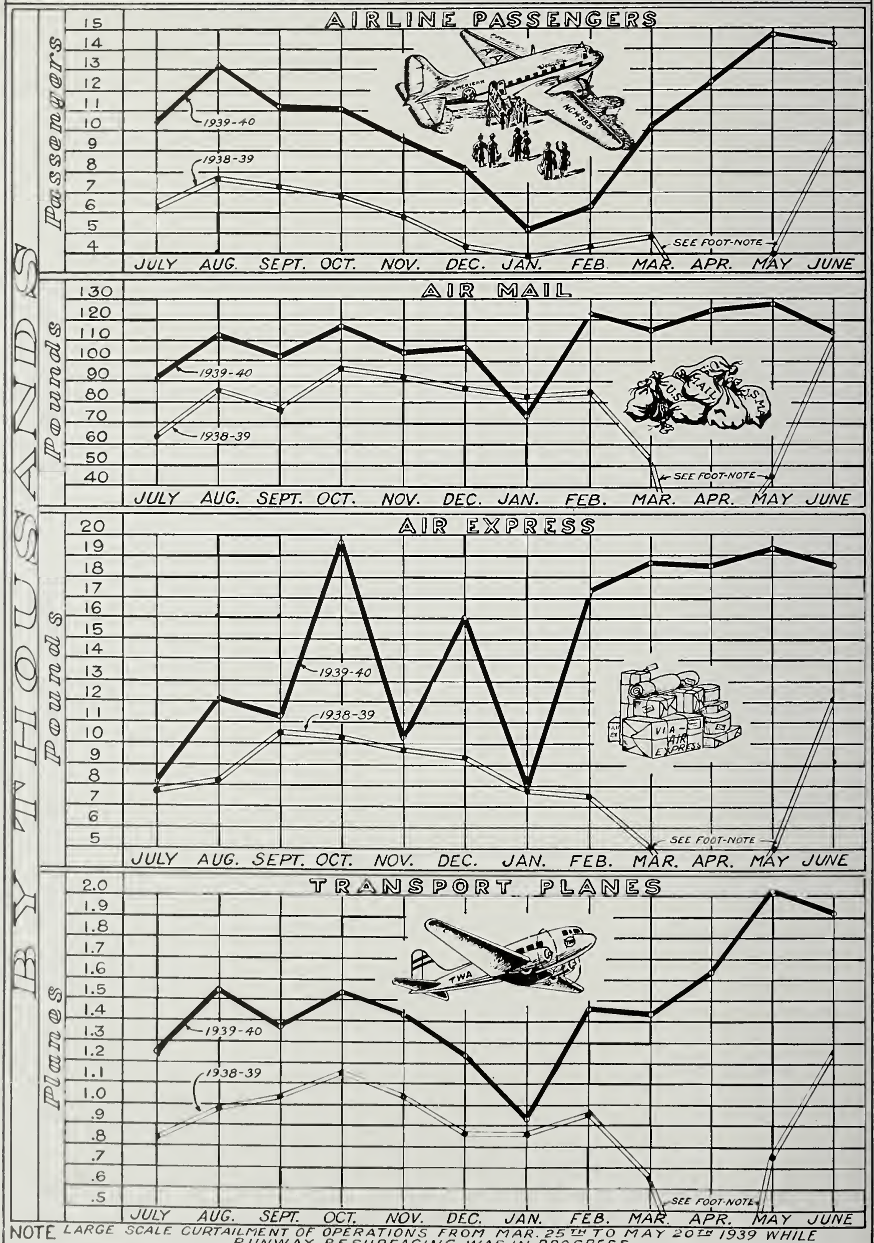
OTHER TENANTS

United Air Lines:

The United Air Lines office at San Francisco Airport is located off the main lobby at the south end, and includes a portion of the semicircular, black onyx ticket counter. The office is under the supervision of the operations department of the airline, but works in close cooperation with the traffic department. All airport business of United Air Lines, including ticket sales and validation, and the handling of passengers and their baggage are the responsibilities of the local office. The personnel consists of a District Superintendent of Passenger Service, Mr.

SAN FRANCISCO AIRPORT

Comparative Traffic Figures
For 1938-1939 and 1939-1940 Fiscal Years



NOTE LARGE SCALE CURTAILMENT OF OPERATIONS FROM MAR. 25TH TO MAY 20TH 1939 WHILE RUNWAY RESURFACING WAS IN PROGRESS

C. C. Robinson, eleven passenger agents and two couriers. The United courier is an innovation of the past year in airline operation. His duties are to meet and direct passengers, and to serve as doorman, gateman and general contact man with the airline patrons at the airport. His presence, marked by a colorful uniform, has proven very popular with the flying public.

The main ticket office and reservations department of the United Air Lines are located at Post and Powell Streets in downtown San Francisco.

Transcontinental & Western Air, Inc.:

The northern California operations base of Transcontinental & Western Air, Inc., is located at San Francisco Airport. The various departments which make up the base include the office headquarters on the mezzanine floor of the Administration Building, the radio department, the ticket office with counter space off the main lobby, and the whole of Hangar No. 4 together with its shop space. The personnel of the base consists of the Assistant Superintendent of Pacific Division, Mr. H. G. Andrews, a flight dispatcher, seven pilots (captains and first officers), four hostesses, two radio operators, two passenger agents, a maintenance chief and twelve maintenance men.

The main ticket office and reservations department of Transcontinental & Western Air are located at 216 Stockton Street in downtown San Francisco.

Pacific Airmotive Corporation:

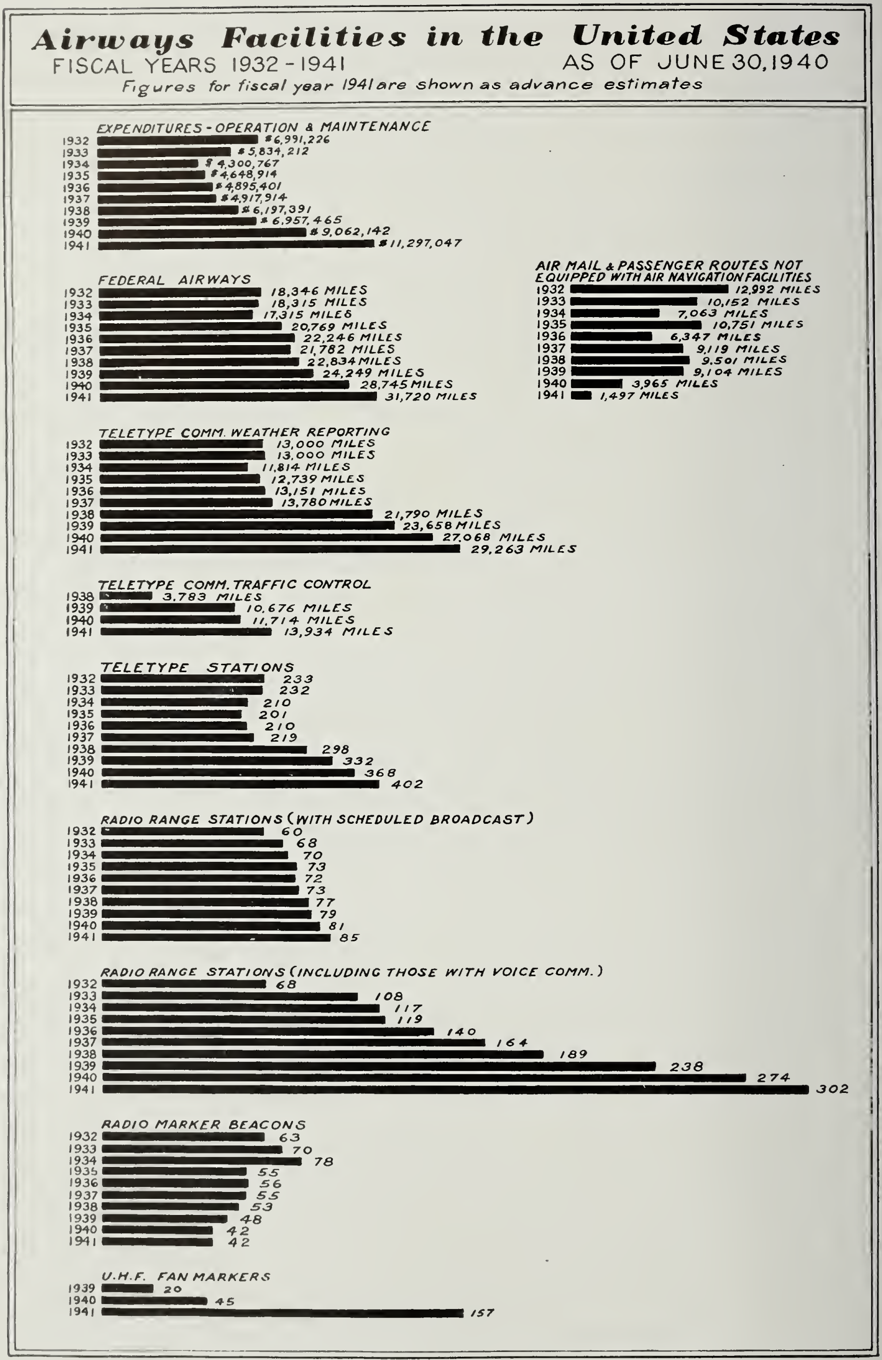
The licensed repair depot of Pacific Airmotive Corporation occupies the airport's airplane and engine maintenance building and a portion of Hangar No. 3. This local depot is the northern California branch of an organization which has long been considered outstanding in its field on the Pacific Coast. Its parts and supplies department is complete in every detail, and its shops provide repair service for all types of airplanes, engines, and propellers. The corporation is a subsidiary of the Airplane Manufacturing and Supply Corporation.

Wunderlich Radio, Inc.:

Occupying office and shop space in the annex of Hangar No. 3, Wunderlich Radio, Inc., manufactures and performs maintenance work on all types of radio equipment. Its engineers are specialized in the field of aeronautical radio, but the design, construction and repair of equipment for any other specified use is also handled.

Airdrome Transport:

The Airdrome Transport Division of the Gray Line, Inc., provides deluxe limousine service for both departing and arriving airline passengers at San Francisco Airport. For the benefit of outgoing passengers desiring transportation to the airport the limousines leave the downtown ticket offices 30 minutes before plane departure time. All inbound schedules are met at the airport. The reasonable fare of $1.00 per passenger is charged for transportation to or from San Francisco. Pilots and passengers of privately owned itinerant aircraft may also take advantage of this limousine service.



Airways Facilities in the United States

FISCAL YEARS 1932-1941 AS OF JUNE 30, 1940

Figures for fiscal year 1941 are shown as advance estimates

Skyway Cafe:

The airport's coffee shop, refreshment lounge, and concession counter are operated by Mr. David Rasmussen under a lease agreement with the Public Utilities Commission. The concessions are jointly termed the "Skyway Cafe." Restaurant service is provided from 6 A.M. to 10 P.M., refreshment lounge service from 10 A.M. to 2 A.M., and the concession counter in the lobby is open from 10 A.M. to 8 P.M.

Oil Companies and Mechanics:

Aviation fuel supply is sold at San Francisco Airport by the following companies:

Associated Oil Company
Shell Oil Company
Standard Oil Company
Union Oil Company

Gasoline grades ranging from 73 to 100 octane are offered.

Independent licensed aircraft mechanics are available on the field for operators desiring their services.

AIRPORT TRAFFIC CONTROL

With a surge in all forms of air traffic occurring throughout the nation, air traffic control has become a major problem of both the Civil Aeronautics Authority and the local airport managements. The C. A. A.'s "Airway Traffic Control" is responsible for traffic along the airways of the nation, but at air terminals, where all of this traffic converges, the airport managements are largely responsible for providing proper control. Although airport traffic control can be and is standardized to a certain point, each airport offers an individual problem due to its particular physical characteristics, its runway plan, its environment, and the type of operation conducted.

San Francisco Airport Traffic Rules Revised:

At San Francisco Airport the increased activity of the past year has made necessary a complete revision of the local air-traffic rules and regulations. On March 15, 1940, a new set of rules was put into effect and has resulted in a much smoother and safer flow of traffic.

One of the principal innovations in these rules was the requirement that each aircraft based at or regularly operating from San Francisco Airport be equipped with a radio receiver capable of receiving radiotelephone messages from the control tower operator within a five mile radius of the airport. The beneficial effects of this requirement are many. Not only can the control tower operator talk directly to any individual pilot, but every pilot hears what is being broadcast and thereby forms a mental picture of the entire traffic plan in effect at the time.

Another section of the new rules deals with turning and taxiing on the airport. A plan was devised for striping and dividing each runway, and simple yet rigid rules regarding the use of these lines make it possible for each pilot in the air or on the ground to anticipate the actions of every other pilot.

The Honorable Clinton M. Hester, Administrator of the Civil Aeronautics Authority, was advised of the steps taken by the airport management with regard to added safety measures in controlling traffic, and a copy of the local rules was forwarded him. In reply, the Airport Manager received a letter of warm congratulations from Mr. Hester on the efficient manner in which the increasing traffic control problems had been handled at this airport.

Air-traffic Control-tower Operators Licensed by Civil Aeronautics Authority:

The traffic control tower is manned 24 hours daily by a group of six licensed operators and a part time clerk. The clerk will receive an air-traffic control-tower operators' license within the next few months. Due to increasing activity, it has become apparent that the traffic control personnel will have to be steadily augmented, and several employees at the airport are already taking steps to prepare themselves for examinations conducted by the Civil Aeronautics Authority. At the present time five operators have "senior" certificates, and one operator a "junior" certificate. Prior to taking the written and oral examination required for a certificate the applicant must pass a physical examination equivalent to that given a transport pilot. The certificate and physical examination must be renewed annually.

WEATHER DEPARTMENT

At the U. S. Weather Bureau offices on the mezzanine floor of the Administration Building, weather reports from all sections of the United States are available to pilots contemplating cross-country flights, and to any member of the general public who may be interested in weather conditions. The reports are received via the teletype circuits of the Civil Aeronautics Authority, and consist of hourly weather sequences, weather forecasts, and upper air wind reports. Weather maps are received daily from the District Forecast Center and the Airway Forecast Center.

Reports of San Francisco Airport weather are taken hourly by the weather observers on duty, and are transmitted via teletype to all points in the West. The radio stations of the Authority broadcast the reports to pilots in flight, the broadcasts being made on definite, published schedules.

Permanent files of San Francisco Airport weather are kept for future reference, and monthly summaries of the local reports are compiled and made available to anyone desiring the use of weather averages.

The local Weather Bureau is under the charge of Mr. William Houmark, who is assisted by three airway observers. Service is maintained 24 hours daily.

SAFETY AT SAN FRANCISCO AIRPORT

Maintaining an enviable safety record, San Francisco Airport has operated during the past year without a single accident involving injury to pilots or passengers of aircraft. In airline operations at the field the "in and out" passengers totaled 126,546, which figure does not include the crew of three in each transport plane. Considering both passengers and crews, and considering only the operations conducted between 6:50 A.M. and 10:10 P.M., when over 90 per cent of the day's schedules are operated, this safety record means that an average of one person every 1.6 minutes either landed or took off in scheduled airline operation at San Francisco Airport during the entire year without an accident of any kind.

The figures for local and itinerant flying operations are even more impressive. Landings and takeoffs numbered well over 100,000 in the various types of operation involved, such as student instruction, practice flights, charter and scenic flights, business and pleasure flights of privately owned aircraft, and the arrivals and departures of visiting aircraft from all parts of the country. That no accident involving even minor injury occurred during the year is a striking testimonial to the safety of present day flying. Pilots are efficient and well trained, traffic regulations of the Civil Aeronautics Authority and of San Francisco Airport itself are carefully drawn and properly enforced, and the traffic control personnel are handling their responsibilities with diligence and efficiency.

AIRPORT PERSONNEL

As of June 30, 1940, the personnel of San Francisco Airport was composed of 24 men, with classifications as follows:

Manager, Mr. B. M. Doolin
Assistant Manager, Mr. H. S. Messersmith
1—Senior Control Tower Operator
4—Associate Control Tower Operators
1—Junior Control Tower Operator
3—Crew Chiefs
1—Clerk Stenograhper
1—Maintenance Chief
8—Airport Attendants
3—Janitors

At the civic election of May 7, 1940, a charter amendment was passed which places all airport positions, except that of Manager, under the City's Civil Service System. The vote on the amendment was 84,000 to 53,000. It will become effective after being ratified by the State Legislature. All employees at the airport who have held their positions for one year or more prior to that date on which the amendment becomes effective will continue in their respective positions as though appointed thereto under regular Civil Service procedures.

FINANCIAL STATEMENTS

Complete financial statements for San Francisco Airport are printed herewith. An item worthy of consideration is to be found in the "Income Account" amounting to $12,648.20 is shown for the 1939-1940 fiscal year, and a decrease in expense of $1,806.61.

Another item worthy of note is shown in the statement headed "Comparison of Actual Revenues and Expenditures with Budget Estimates." The tabulation shows that a net saving of $16,113.79 was effected on the operating budget estimate.

SCHEDULE No. 1

SAN FRANCISCO AIRPORT

TENTATIVE BALANCE SHEET—JUNE 30, 1940

ASSETS

Fixed Capital:		
In Service	$2,980,538.11	
Less Reserve for Depreciation	339,388.52	
	$2,641.149.59	
Under Construction (1938 Airport Bond Fund)	1,423,234.51	$4,064,384.10
Cash:		
Operating Fund	$29,119.27	
Revolving Fund	200.00	
1938 Bond Fund	353,055.44	382,374.71
Accounts Receivable:		
Accounts Receivable	$13,203.18	
Less Reserve for Bad Accounts	3,800.00	
	$9,403.18	
Harris Trust & Savings Bank, Et Al.	945,000.00	$954,403.18
Inter-Fund Accounts:		
General Fund—Taxes Receivable, 1939-1940	$427.01	
General Fund—Taxes Receivable, 1938-1939 and prior	2,373.17	
	$2,800.18	
Less Reserve for Uncollectible Taxes	605.64	2,194.54
Deferred Charges:		
Materials and Supplies	$909.91	
Prepaid Insurance	264.86	
Outstanding Encumbrances (Contra)	181,720.08	
Suspense Debits	261.56	183,156.41
		$5,586,512.94

LIABILITIES

Bonded Debt:		
1938 Airport Bonds dated January 1, 1938:		
Interest Rate not to exceed 6%; Due January 1, 1940 to 1949, inclusive, at the rate of $285,000.00 per year Bonds Authorized	$2,850,000.00	
Less Bonds Matured	285,000.00	
Bonds Outstanding (Details Annexed)		$2,565,000.00
Bond Interest Payable:		
Accrued—Not Due—1938 Airport Bonds		14,760.00
Accounts Payable:		
Warrants Outstanding—Operating Fund	$2,438.11	
General Creditors—Operating Fund	1,442.51	
Warrants Outstanding—Bond Fund	2,323.82	
General Creditors—Bond Fund	7,470.15	
Outstanding Encumbrances (Contra)	181,720.08	195,394.67
Inter-Fund Accounts:		
Operating Fund Owes Public Service Enterprises	$4,485.36	
Operating Fund Owes General Fund	2,645.80	
Bond Fund Owes Public Service Enterprises	5,434.20	
Bond Fund Owes General Fund	5,356.17	17,921.53
Deferred Credits:		
Advance Rental Deposits	$216.67	
Suspense Credits	2,962.04	3,178.71

SURPLUS

Detailed Schedule Annexed		2,790,258.03
		$5,586,512.94

SCHEDULE No. 2

SAN FRANCISCO AIRPORT

INCOME ACCOUNT

FOR TWELVE MONTHS ENDED JUNE 30, 1940 AND 1939

	Twelve Months Ended June 30		Increase or *Decrease*
	1940	1939	
REVENUES			
Rental—Hangar	$14,387.81	$13,354.78	$1,033.03
Rental—Shop	4,495.75	4,317.55	178.20
Rental—Office	1,819.75	1,393.00	426.75
Rental—Locker	69.00	70.00	*1.00*
Rental—Land	1,893.33	......	1,893.33
Gasoline Sales Commission	1,125.48	1,021.61	103.87
Handling Charges	38,008.75	30,365.12	7,643.63
Telephone Income	332.81	170.95	161.86
Other Income	1,800.74	592.21	1,208.53
Total Revenues	$63,933.42	$51,285.22	$12,648.20
EXPENSES			
Salaries—Permanent	$43,464.27	$43,639.84	*$175.57*
Salaries—Temporary	1,648.00	1,065.70	582.30
Gas and Electricity	8,582.01	7.871.34	710.67
Telephone, Telegraph and Postage	2,853.23	3,586.89	*733.66*
Materials and Supplies	4,376.03	4,293.78	82.25
Provision for Bad Accounts	300.00	300.00	......
Provision for Depreciation	62,111.70	64.354.30	*2,242.60*
Traveling	594.21	296.20	298.01
Transportation of Employees	4,401.88	3.464.57	937.31
Maintenance and Repair—Buildings and Structures	725.93	249.42	476.51
Maintenance and Repair—Automobiles and Motorcycles	1,303.09	763.46	539.63
Maintenance and Repair—Miscellaneous Equipment	1,536.17	1,197.96	338.21
Insurance	1,901.05	1,918.23	*17.18*
Miscellaneous Contractual Service	761.91	1,127.30	*365.39*
Taxes	3,221.47	3.134.14	87.33
Services—Bureau of Engineering	877.77	2,286.79	*1,409.02*
Contributions to Retirement System	1,675.13	1.722.46	*47.33*
Bond Interest	......	866.67	*866.67*
Miscellaneous Expense	......	1.41	*1.41*
Total Expense	$140,333.85	$142.140.46	*$1,806.61*
Net Loss	$76,400.43	$90.855.24	*$14,454.81*

Italic figures denote loss and deficiency.

SCHEDULE No. 3

SAN FRANCISCO AIRPORT

SURPLUS ACCOUNT

FOR TWELVE MONTHS ENDED JUNE 30, 1940

Surplus—June 30, 1939			$2,629,806.65
Contribution:			
From: General City—Taxes	$243,880.16		
Less Prior Year Taxes—Receipts and Adjustments	1,414.27	$242,465.89	
Surety Bond Premium		30.00	
General Fund—Emergency Reserve		85.38	
General Fund—Miscellaneous Contributions (Controller's Judgments Fund)		2,500.00	
		$245,081.27	
Deduct:			
Refund to General Fund—Emergency Reserve	$7,284.16		
Profit and Loss—Current Year—Equipment Written Off	154.72		
Profit and Loss—Current Year—Equipment Traded In	739.40		
Revaluation of Fixed Capital—Equipment Written Off	51.18		
Loss for Twelve Months Ended June 30, 1940	76,400.43	84,629.89	
Net Additions to Surplus			160,451.38
Surplus—June 30, 1940			$2,790,258.03

SCHEDULE No. 4

SAN FRANCISCO AIRPORT

DETAIL OF INTER-FUND ACCOUNTS—JUNE 30, 1940

			Balance June 30, 1940
Operating Fund Owes Hetch Hetchy Water Supply (Prior Years):			
	Hetch Hetchy Expenditures for Airport Capital Improvements	$15,636.57	
	Less: C. C. T. V. No. 216—October 7, 1937	12,339.42	$3,297.15
Operating Fund Owes San Francisco Water Department:			
4/30/38	Insurance Premiums—1936-37 Audit Report (Prior Years)	$113.63	
6/30/40	Auto Repairs and Maintenance for period January 1 to June 30, 1940	606.05	
6/30/40	Auto Insurance for Year 1939-1940	468.53	1,188.21
Operating Fund Owes Employees' Retirement System:			
6/30/40	Matching Contributions for the Month of June, 1940	153.07	
6/30/40	Medical Services for Joseph Zunino	8.00	
6/30/40	Compensation Benefits to Edward N. Ross	36.65	197.72
Operating Fund Owes General Fund—P. U. C.—Bureau of Engineering:			
6/29/40	Office Engineering for period January 1 to June 30, 1940		410.24
Operating Fund Owes General Fund:			
4/30/40	Pacific Gas and Electric Co.—Bill for the month of April, 1940	$769.14	
5/31/40	Pacific Gas and Electric Co.—Bill for month of May, 1940	695.94	
6/30/40	Pacific Gas and Electric Co.—Bill for month of June, 1940	572.76	2,037.84
Bond Fund Owes Hetch Hetchy Water Supply:			
6/29/40	Field Engineering for period April 1 to June 30, 1940		5,434.20
Bond Fund Owes General Fund—P. U. C.:			
6/26/40	Office Engineering for period January 1 to March 31, 1940	$1,445.45	
6/29/40	Office Engineering for period April 1 to June 30, 1940	3,910.72	5,356.17
			$17,921.53

SCHEDULE No. 5

SAN FRANCISCO AIRPORT

1938 AIRPORT BONDS—OUTSTANDING JUNE 30, 1940

Amount	Numbers Inclusive	Maturity	Interest Rate
$65,000.00	286– 350	January 1, 1941	2 %
31,000.00	351– 381	January 1, 1941	1¾ %
65,000.00	382– 446	January 1, 1941	1$\frac{7}{10}$ %
19,000.00	447– 465	January 1, 1941	1¾ %
105,000.00	466– 570	January 1, 1941	2 %
65,000.00	571– 635	January 1, 1942	2 %
31,000.00	636– 666	January 1, 1942	1¾ %
65,000.00	667– 731	January 1, 1942	1$\frac{7}{10}$ %
19,000.00	732– 750	January 1, 1942	1¾ %
105,000.00	751– 855	January 1, 1942	2 %
65,000.00	856– 920	January 1, 1943	2 %
31,000.00	921– 951	January 1, 1943	1¾ %
65,000.00	952–1016	January 1, 1943	1$\frac{7}{10}$ %
19,000.00	1017–1035	January 1, 1943	1¾ %
105,000.00	1036–1140	January 1, 1943	2 %
65,000.00	1141–1205	January 1, 1944	2 %
31,000.00	1206–1236	January 1, 1944	1¾ %
65,000.00	1237–1301	January 1, 1944	1$\frac{7}{10}$ %
19,000.00	1302–1320	January 1, 1944	1¾ %
105,000.00	1321–1425	January 1, 1944	2 %
65,000.00	1426–1490	January 1, 1945	2 %
30,000.00	1491–1520	January 1, 1945	1¾ %
65,000.00	1521–1585	January 1, 1945	1$\frac{7}{10}$ %
20,000.00	1586–1605	January 1, 1945	1¾ %
105,000.00	1606–1710	January 1, 1945	2 %
65,000.00	1711–1775	January 1, 1946	2 %
30,000.00	1776–1805	January 1, 1946	1¾ %
65,000.00	1806–1870	January 1, 1946	1$\frac{7}{10}$ %
20,000.00	1871–1890	January 1, 1946	1¾ %
105,000.00	1891–1995	January 1, 1946	1½ %
65,000.00	1996–2060	January 1, 1947	2 %
30,000.00	2061–2090	January 1, 1947	1¾ %
65,000.00	2091–2155	January 1, 1947	1$\frac{7}{10}$ %
20,000.00	2156–2175	January 1, 1947	1¾ %
105,000.00	2176–2280	January 1, 1947	1½ %
65,000.00	2281–2345	January 1, 1948	2 %
30,000.00	2346–2375	January 1, 1948	1¾ %
65,000.00	2376–2440	January 1, 1948	1$\frac{7}{10}$ %
20,000.00	2441–2460	January 1, 1948	1¾ %
105,000.00	2461–2565	January 1, 1948	1½ %
65,000.00	2566–2630	January 1, 1949	2 %
30,000.00	2631–2660	January 1, 1949	1¾ %
65,000.00	2661–2725	January 1, 1949	1$\frac{7}{10}$ %
20,000.00	2726–2745	January 1, 1949	1¾ %
105,000.00	2746–2850	January 1, 1949	1½ %
$2,565,000.00			

SCHEDULE No. 6

SAN FRANCISCO AIRPORT

COMPARISON OF ACTUAL REVENUES AND EXPENDITURES WITH BUDGET ESTIMATES

FISCAL YEAR 1939-1940

	Month of June, 1940			Twelve Months to June 30, 1940		
DESCRIPTION	Budget	Revenues Expenditures Accruals	Increase or *Decrease*	Budget	Revenues Expenditures Accruals	Increase or *Decrease*
Salaries—Permanent	$3,640.00	$3,610.00	*$30.00*	$43,680.00	$43,464.27	*$215.73*
Salaries—Temporary	100.00	593.83	493.83	1,200.00	1,648.00	448.00
Contractual Services—						
Telephone, Telegraph and Postage	375.00	275.79	*99.21*	4,500.00	2,853.23	*1,646.77*
Traveling	41.67	119.25	77.58	500.00	594.21	94.21
Transportation of Employees	325.00	418.28	93.28	3,900.00	4,401.88	501.88
Maintenance and Repairs—Buildings and Structures	41.67	131.25	89.58	500.00	725.93	225.93
Maintenance and Repairs—Automobiles	93.33	620.55	527.22	1,120.00	1,303.09	183.09
Maintenance and Repairs—Miscellaneous Equipment	47.92	66.20	18.28	575.00	1,536.17	961.17
Miscellaneous Contractual Services	99.58	87.05	*12.53*	1,195.00	761.91	*433.09*
Heat, Light and Power	666.67	572.76	*93.91*	8,000.00	8,582.01	582.01
Materials and Supplies	291.67	615.01	323.34	3,500.00	4,376.03	876.03
Insurance	35.83	*3.90*	*39.73*	430.00	468.53	38.53
Contribution to Retirement System	155.83	153.07	*2.76*	1,870.00	1,675.13	*194.87*
Taxes	291.67	268.43	*23.24*	3,500.00	3,221.47	*278.53*
Services of Bureau of Engineering	83.33	410.24	326.91	1,000.00	877.77	*122.23*
Total Operating Expenditures	$6,289.17	$7,937.81	$1,648.64	$75,470.00	$76,489.63	$1,019.63
Bond Interest and Redemption—						
1938 Airport Bond Interest	$4,750.00	$2,460.00	*$2,290.00*	$57,000.00	$30,841.25	*$26,158.75*
1938 Airport Bond Redemption	....	....	....	285,000.00	285,000.00	....
Total Expenditures	$11,039.17	$10,397.81	*$641.36*	$417,470.00	$392,330.88	*$25,139.12*
Total Revenues	$4,292.72	$5,695.92	$1,403.20	$46,800.00	$63,933.42	$17,133.42
Net Savings on Operating Budget Estimate			*$245.44*			$16,113.79

SAN FRANCISCO AIRPORT
TRIAL BALANCE

June 30, 1940

		Debit	Credit
1000	Fixed Capital in Service	$2,770,132.80	
1099	Reserve for Depreciation		$339,388.52
2000	Cash—Treasurer—Operating Fund	29,119.27	
2100	Cash—Other—Revolving Fund	200.00	
2500	Accounts Receivable—Miscellaneous Debtors	10,436.74	
2504	Accounts Receivable—Uncollectible Accounts	2,766.44	
2510	Reserve for Bad Accounts		3,800.00
3202	Inter-Fund Accounts—Hetch Hetchy Water Supply		3,297.15
3204	Inter-Fund Accounts—San Francisco Water Department		1,188.21
3300	Inter-Fund Accounts—Employees' Retirement System		197.72
3302	Inter-Fund Accounts—P. U. C.—Bureau of Engineering		410.24
3308	Inter-Fund Accounts—General Fund		2,037.84
3315	Inter-Fund Accounts—General Fund—Prior Year Taxes	2,194.54	
3600	Deferred Charges—Materials and Supplies	909.91	
3606	Deferred Charges—Prepaid Insurance	264.86	
3612	Deferred Charges—Outstanding Encumbrances (Contra)	164.95	
3680	Deferred Charges—Suspense Debits	261.56	
5200	Accounts Payable—Warrants Outstanding		2,438.11
5210	Accounts Payable—General Creditors		1,442.51
5218	Accounts Payable—Outstanding Encumbrances (Contra)		164.95
5406	Deferred Credits—Advance Rental Deposits		216.67
5410	Deferred Credits—Suspense Credits		2,962.04
5600	Surplus—Contributions from Taxes		1,824,863.22
5602	Surplus—Profit and Loss—Prior Years	543,941.95	
5604	Surplus—Profit and Loss—Current Year	894.12	
5606	Surplus—Federal Grants Earned		55,000.00
5610	Surplus—Miscellaneous Contributions		24,520.00
5612	Surplus—Emergency Reserve Contributions		9,800.17
5614	Surplus—From Donations in Connection with and Revaluation of Fixed Capital in Service		1,166,787.30
5616	Surplus—Contribution to 1938 Airport Bond Fund	782.00	
5617	Surplus—Contribution to San Francisco Water Department	45.08	
6000	Rental—Hangars		14,387.81
6002	Rental—Shop		4,495.75
6008	Rental—Office		1,819.75
6010	Rental—Locker		69.00
6012	Rental—Land		1,893.33
	Total Forwarded	$3,362,114.22	$3,461,180.29

SAN FRANCISCO AIRPORT
TRIAL BALANCE
June 30, 1940

		Debit	Credit
	Total Brought Forward	$3,362,114.22	$3,461,180.29
6014	Gasoline Sales Commission		1,125.48
6022	Handling Charges		38,008.75
6024	Telephone Income		332.81
6030	Other Income		1,800.74
7000	Salaries—Permanent	43,464.27	
7002	Salaries—Temporary	1,648.00	
7006	Gas and Electricity	8,582.01	
7010	Telephone, Telegraph and Postage	2,853.23	
7012	Materials and Supplies	4,376.03	
7014	Bad Accounts (Estimated)	300.00	
7016	Depreciation	62,111.70	
7020	Traveling	594.21	
7021	Transportation of Employees	4,401.88	
7022	Maintenance and Repairs—Buildings and Structures	725.93	
7024	Maintenance and Repairs—Automobiles and Motorcycles	1,303.09	
7026	Maintenance and Repairs—Miscellaneous Equipment	1,536.17	
7032	Insurance	1,901.05	
7034	Miscellaneous Contractual Services	761.91	
7036	Taxes	3,221.47	
7038	Services—Bureau of Engineering	877.77	
7042	Contributions to Retirement System	1,675.13	
	Total	$3,502,448.07	$3,502,448.07

SAN FRANCISCO AIRPORT
TRIAL BALANCE
June 30, 1940
FIXED CAPITAL IN SERVICE

I.	LAND	$804,699.50
II.	LANDPLANE PORT	
1.	Landing Area:	
1a.	Land Reclamation and Improvement	418,394.00
1b.	Field Drainage	108,521.00
1c.	Drainage Control	77,282.00
1d.	Runways, Taxiways and Aprons	310,545.00
1e.	Landing Field Lighting and Marking	63,946.00
1f.	Radio	10,401.23
2.	Utilities, Roads and Parking Area:	
2a.	Roads, Walks, Parking Areas, Fences, etc.	115,073.00
2b.	Water Supply System	8,850.00
2c.	Sewerage System	10,333.00
2d.	Power Supply System and Street Lighting	29,071.00
2e.	Telephone System (Outside of Buildings)	4,441.00
2f.	Gas Supply System	607.00
2g.	Bridges and Culverts	16,689.00
2h.	Landscaping	7,099.00
2i.	Miscellaneous	1,375.00
3.	Buildings	407,605.72
4.	Equipment:	
4a.	Office Furniture and Appliances	12,226.47
4b.	Shop Tools and Building Maintenance Equipment	464.31
4c.	Fire Fighting Equipment	5,152.49
4d.	Motor Driven Equipment	8,535.00
4e.	Meteorological Equipment	948.00
4f.	Drainage Pump House Equipment	4,662.00
4g.	Sewage Pump House Equipment	1,850.00
4h.	Other Equipment	1,811.08
III.	SEAPLANE PORT	
5.	Land Reclamation and Improvement	339,551.00
		$2,770,132.80

SAN FRANCISCO AIRPORT—TRIAL BALANCE—PROPRIETARY LEDGER IN RE TRANSACTIONS IN CONNECTION WITH 1938 AIRPORT BOND ISSUE INCLUDING BOND FUNDS AND BOND INTEREST FUNDS

June 30, 1940

		Debit	Credit
100	Fixed Capital Under Construction	$1,423,234.51	
105	Fixed Capital in Service	210,405.31	
200	Cash—Treasurer—Bond Fund	353,055.44	
255	Accounts Receivable—Harris Trust & Savings Bank, Et Al.	945,000.00	
360	Inter-Fund Accounts—P. S. E.—Hetch Hetchy Water Supply		$5,434.20
415	Inter-Fund Accounts—P. U. C.—Bureau of Engineering		5,356.17
472	Deferred Charges—Outstanding Encumbrances (Contra)	181,555.13	
502	Bonds Authorized		2,565,000.00
510	Bond Interest Accrued—Not Due		14,760.00
600	Accounts Payable—General Creditors		7,470.15
605	Accounts Payable—Warrants Outstanding		2,323.82
620	Accounts Payable—Outstanding Encumbrances (Contra)		181,555.13
662	Bond Premium Lot 1—($650,000.00)—2% Bonds		714.35
663	Bond Premium Lot 2—($305,000.00)—1¾% Bonds		561.20
664	Bond Premium Lot 3—($650,000.00)—1$\frac{7}{10}$% Bonds		1,885.00
700	Surplus—Contributions from Taxes		327,408.37
702	Surplus—Contributions from San Francisco Airport		782.00
		$3,113,250.39	$3,113,250.39

FIXED CAPITAL UNDER CONSTRUCTION

100-1	Interest during Construction	$57,168.37
100-2	Preliminary Expense	3,349.22
100 3	Legal Fees and Expenses	800.00
100-4	Plans and Specifications—General Office	42,942.79
100-5	Inspection, Supervision and Field Engineering	71,263.59
100-6	Land Acquisition	32,843.60
100-7	Rights of Way and Easements	1,042.50
100-8	Construction Equipment, Tools, etc.	81,876.99
100-9	Stores Inventory (Materials and Supplies for Subsequent Distribution)	28.600.49
100-10	Earth and Rock Fill Construction	869,639.73
100-11	Improvements to Runways, Field and Grounds (Paving and Drainage)	196,393.16
100-12	Field Lighting	28,437.36
100-13	Buildings and Appurtenances	1,983.28
100-14	Service Extensions (Gas, Water, Telephone, Electric and Sewer)	6.293.43
100-15	Seaplane Harbor and Channel	600.00
		$1,423,234.51

OPERATIONS OF UNITED AIR LINES AND TRANSCONTINENTAL & WESTERN AIR AT SAN FRANCISCO AIRPORT

Month	Transport Planes (Arrs. and Deps.) 1938-39	Transport Planes (Arrs. and Deps.) 1939-40	Percentage Increase	Passengers** 1938-39 In	Passengers** 1938-39 Out	Passengers** 1939-40 In	Passengers** 1939-40 Out	Total Passenger Percentage Increase	Pounds of Air Mail In and Out 1938-39	Pounds of Air Mail In and Out 1939-40	Percentage Increase or Decrease	Pounds of Air Express Out Only 1938-39	Pounds of Air Express Out Only 1939-40	Percentage Increase
July	815	1,247	53%	2,963	3,109	5,194	5,289	73%	60,498	90,555	+50%	7,743	8,008	3%
August	975	1,572	61%	3,875	3,987	6,507	6,565	66%	86,064	116,075	+35%	8,049	12,123	51%
September	1,016	1,361	34%	3,607	3,709	5,499	5,743	54%	78,153	100,797	+29%	10,727	11,317	6%
October	1,167	1,565	34%	3,463	3,462	5,455	5,599	60%	98,175	118,032	+20%	10,669	19,676	84%
November	1,029	1,415	38%	2,933	2,898	4,662	4,799	62%	90,626	104,579	+15%	9,750	9,999	3%
December	848	1,216	43%	1,979	2,100	3,948	4,127	98%	86,555	107,027	+24%	9,411	16,167	72%
January	843	903	7%	1,926	1,948	2,529	2,710	35%	84,412	74,701	—12%	7,796	7,915	2%
February	951	1,474	55%	1,937	2,115	3,139	3,316	59%	87,187	121,955	+40%	7,477	17,161	129%
March	*656	1,414	*....	*2,252	*2,535	4,984	5,217	*....	*53,385	116,260	*....	*5,001	18,893	*....
April	*144	1,660	*....	*281	*370	6,030	6,220	*....	*2,775	124,994	*....	*301	18,754	*....
May	*770	2,051	*....	*1,780	*1,950	7,335	7,521	*....	*45,692	127,885	*....	*4,439	19,666	*....
June	1,238	1,919	55%	4,871	4,824	6,905	7,253	46%	113,570	112,451	— 1%	12,177	18,769	54%
Totals***	8,882	12,672	43%	27,554	28,152	43,838	45,401	60%	785,240	946,172	+20%	83,799	121,135	45%
(9 Mos.) (Exclusive of March, April and May)				55,706		89,239								
Totals***	*10,452	17,797	*....	*31,867	*33,007	62,187	64,359	*....	*887,092	1,315,311	*....	*93,540	178,448	*....
(12 Mos.)				*64,874		126,546								

*Large scale curtailment of operations from March 25 to May 20, 1939, while runway resurfacing was in progress.

**Tabulations in previous annual reports have shown "off and on" figures, excluding "through" passengers. Since most other airports use the "in and out" figures, including "through" passengers, this method has been adopted at San Francisco Airport.

***See paragraph on adjoining page termed "San Francisco Airport Traffic Figures."

WEATHER DATA

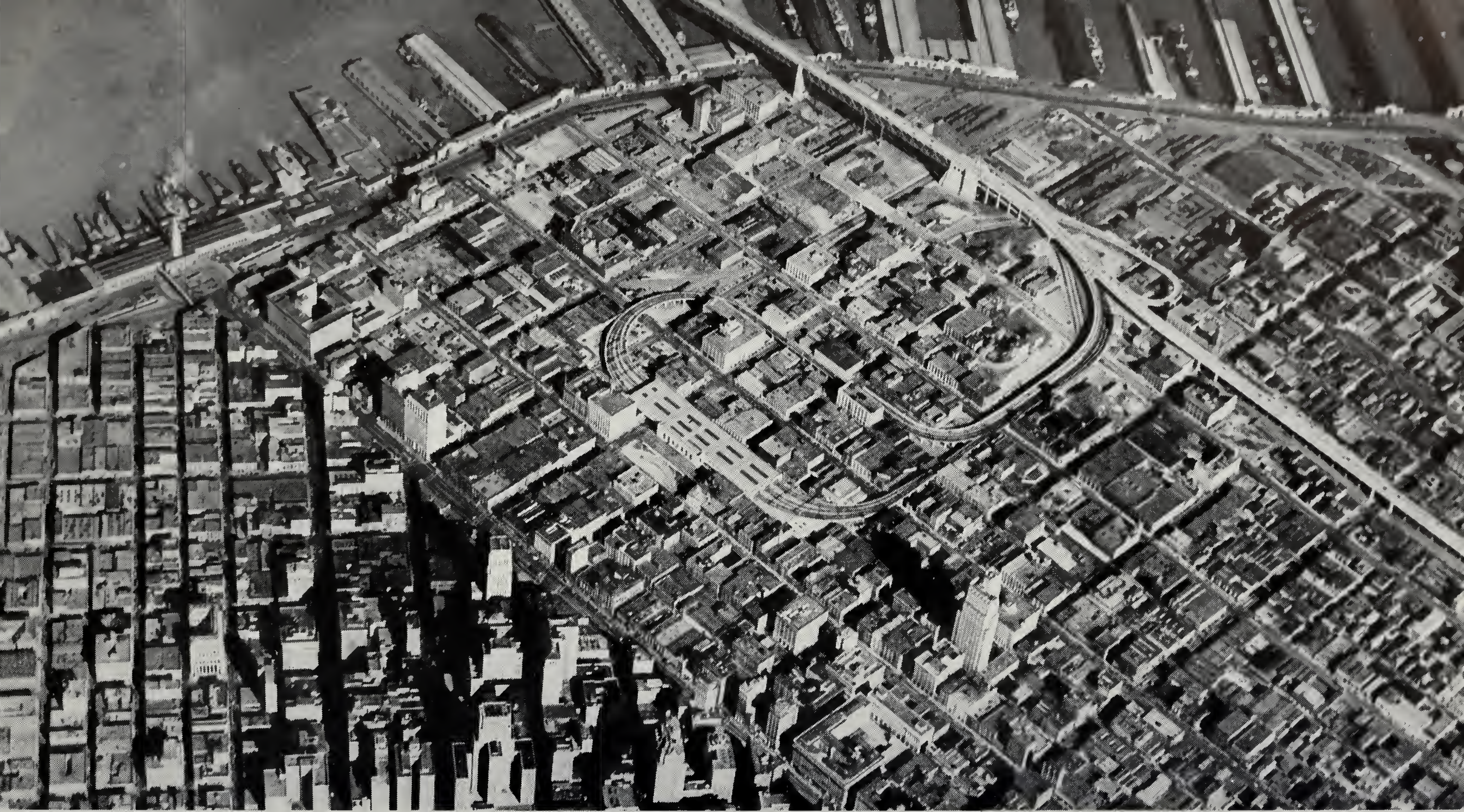
Fiscal Year 1939-1940

	TEMPERATURES					PRECIPITATION		WIND		NUMBER OF DAYS			
	Average Daily Maximum	Average Daily Minimum	Average	Absolute Highest	Absolute Lowest	Total	Greatest in 24 Hours	Prevailing Direction	Average Velocity	Clear	Partly Cloudy	Cloudy	Rain (.01 or more)
1939													
July	68.2	52.6	60.4	87	47	Trace	Trace	NW	16.0	20	7	4	0
August	69.2	53.0	61.1	85	46	Trace	Trace	WNW	15.0	20	6	5	0
September	77.6	54.5	66.0	102	48	1.03	0.78	NW	10.6	14	11	5	2
October	72.0	50.8	61.4	91	44	0.35	0.20	WNW	10.6	24	3	4	3
November	68.6	42.9	55.7	80	41	0.38	0.38	WNW	6.9	18	10	2	1
December	61.0	44.4	54.7	70	37	1.02	0.34	SE	5.9	7	4	20	10
1940													
January	58.2	44.5	51.3	67	32	8.78	1.51	SE	8.6	9	2	20	17
February	60.2	46.9	53.6	69	36	7.51	1.50	WNW	9.8	4	5	20	15
March	63.9	47.6	55.8	73	37	4.18	2.11	WNW	9.2	8	8	15	8
April	64.5	48.9	56.7	83	42	0.34	0.21	WNW	12.8	4	9	17	4
May	65.2	49.5	57.4	78	42	0.58	0.35	WNW	13.9	8	13	10	2
June	68.3	50.8	59.6	77	46	Trace	Trace	NW	12.8	13	14	3	0
Fiscal Year 1939-1940	66.4	48.9	57.8	102	32	24.17	2.11	WNW	11.0	149	92	125	62

DATA FOR WIND ROSE—Fiscal Year 1939-1940

Number of Days Prevailing Wind Blew From Each Direction

N	0 days	E	7 days	S	8 days	W	47 days
NNE	0 days	ESE	7 days	SSW	9 days	WNW	133 days
NE	3 days	SE	21 days	SW	17 days	NW	96 days
ENE	3 days	SSE	6 days	WSW	8 days	NNW	1 day
						Total	366 days



MUNICIPAL RAILWAY TERMINALS
Air view of the Embarcadero showing the Ferry Building (center left) and the Bay Bridge Terminal in the center of the loop from the trans-Bay span. These are the railway's two principal terminals.

MUNICIPAL RAILWAY OF SAN FRANCISCO

FRED BOEKEN

Manager

FRED BOEKEN
Manager, Municipal Railway.

General:

The Municipal Railway on June 30, 1940, had completed another fiscal year's operation which in many respects was one of its most outstanding years in its twenty-seven and one-half years of furnishing transportation to the people of San Francisco. Passengers carried, totalling 111,302,499, and passenger revenue, amounting to $4,135,903 for the fiscal year exceeded any previous fiscal year since the commencement of operations on December 28, 1912. Net profit of $324,981 was a decrease of $67,294 from the previous year, principally due to the loss incurred by reason of operating four new motor coach lines which commenced operation during the months of July and August, 1939, in districts greatly in need of transportation.

The sustained large volume of business enjoyed by the Municipal Railway during the year can be attributed in part to the difference in the rates of fares in effect on the Municipal Railway lines, which was 5 cents with a free transfer privilege, and the rate in effect by the Market Street Railway Company, which was 7 cents with a free transfer privilege. The year's business also includes a total of 158 days of operation of the Golden Gate International Exposition—122 days for the period July 1, 1939, to October 30, 1939, and 36 days from May 25, 1940, to June 30, 1940. The four new motor coach lines placed in operation accounted for $24,294 in additional receipts. These lines operate in the Miraloma, Sunset-Parkside, Bayshore, and Telegraph Hill districts.

Service was furnished during the year to both the Ferry terminal and to the Bay Bridge terminal. The Bay Bridge loop which was completed in January, 1939, was constructed from Municipal Railway funds at a total cost of $154,046. The Market Street Railway Company uses the facilities of this loop jointly with the Municipal Railway and, in accordance with an agreement entered into between the Market Street Railway Company and the Public Utilities Commission, pays the Municipal Railway an annual rental of 10 per cent of one-half of the cost of construction and in addition a portion of the maintenance expense in accordance with the use of facilities. The annual rental has been fixed at $7,702. This amount,

NEW STREAMLINE TRANSIT UNIT
Five of these big new street cars are now in operation and others will be added after current litigation has ended.

together with the amount of $6,042 for their proportion of maintenance expense, was paid by the Market Street Railway Company to the Municipal Railway for the fiscal year ended June 30, 1940. The operation of this loop has resulted in a loss of short haul business previously received from operation to the Ferry terminal, and as near as can be determined amounts to a daily decrease of $600 in cash passenger receipts.

Funds were reappropriated during the year in the amount of $228,000 for the new Howard Street trolley coach line. Of the above sum $116,000 was for nine trolley coaches and equipment, and $112,000 for housing facilities, service structures, poles and overhead wiring. Purchase order for the buses was issued and contracts let for overhead construction. However, due to a taxpayer's suit as to the legality of the expenditure, delivery of the trolley coaches and construction of facilities have been held up. One court opinion was rendered in favor of the Municipal Railway, but same is still subject to appeal. In July, 1940, motor coach operation was to commence over the Howard Street route with present available equipment supplemented by rented coaches. Studies indicate that this will develop into a paying line.

Other new capital expenditures for which funds were appropriated were as follows: Purchase of land and grading, and construction of the Seventeenth Street storage yard, $145,000; purchase of land and construction of a new motor coach garage, $100,000; purchase of twenty new motor coaches, $180,000. Due to the previously mentioned taxpayer's suit, the above purchases and construction cannot immediately be completed. Land for the storage yard was purchased prior to the date of the suit. Ten new motor coaches which are badly needed to provide additional service on several motor coach routes, were ordered and are ready for delivery, but delivery cannot be made pending the outcome of the suit.

Five new modern type street cars were purchased at a cost of $110,881, replacing five old street cars and were placed in service in December, 1939. They have proved exceedingly popular with the public which has indicated that more cars of this type should be operated.

The net profit from operations for the fiscal year ended June 30, 1940, amounted to $324,981. This is after providing $378,370 for depreciation and $125,472 for a reserve for accidents. After providing for bond redemption there remained a surplus of $224,981. This surplus together with such additional funds as may be accumulated in the future will be available to enable the Public Utilities Commission to extend motor coach routes to districts badly in need of transportation and to provide for other needed capital expenditures.

The Golden Gate International Exposition is scheduled to close on September 29, 1940, and revenues will probably show some decrease after that date. However, due to expenditures to be made by the Federal Government in connection with defense preparations which will result in a revival of the shipbuilding business here and affect many other businesses, it is expected that the revenues of the Municipal Railway will also be greatly benefited.

Operating revenue for the fiscal year ended June 30, 1940, was $4,182,392, an increase of $38,843 or .937 per cent.

Operating expenses (not including reserves or bond interest) amounted to $3,302,055, an increase of $86,173 or 2.68 per cent. Wage scales remained the same as in the previous fiscal year, and the increase in car and motor coach hours operated to provide for needed service, and new motor coach routes account for this increase in operating expenses.

In considering the net income of $324,981 previously noted, it must be remembered that the Municipal Railway still maintains a wage schedule for per diem employees which is substantially higher than the average paid by private street railway companies.

Comparison of the budget estimate with actual results of operation for the fiscal year show a decrease in estimated receipts of $72,057 and a decrease in estimated expenditures of $102,933, a net saving on the budget estimate of $30,876.

The only indebtedness now against the Municipal Railway property is the Municipal Railway bond issue of 1913, originally issued for $3,500,000 of which $1,300,000 is still outstanding, this amount to be amortized at the rate of $100,000 per year for the next thirteen years.

The number of employees as of June 30, 1940, was 1,296, an increase of 11 over the same day in 1939.

The retention of the 5 cent fare with free transfer privilege on the Municipal Railway lines has afforded the car and motor coach riders of this system a large saving during the year. As the average fare on street railways in the United States is about 8.33 cents, it is conservative to estimate this saving to riders served by the Municipal Railway for the past year at over $2,700,000.

RELOCATION GEARY STREET TRACKS

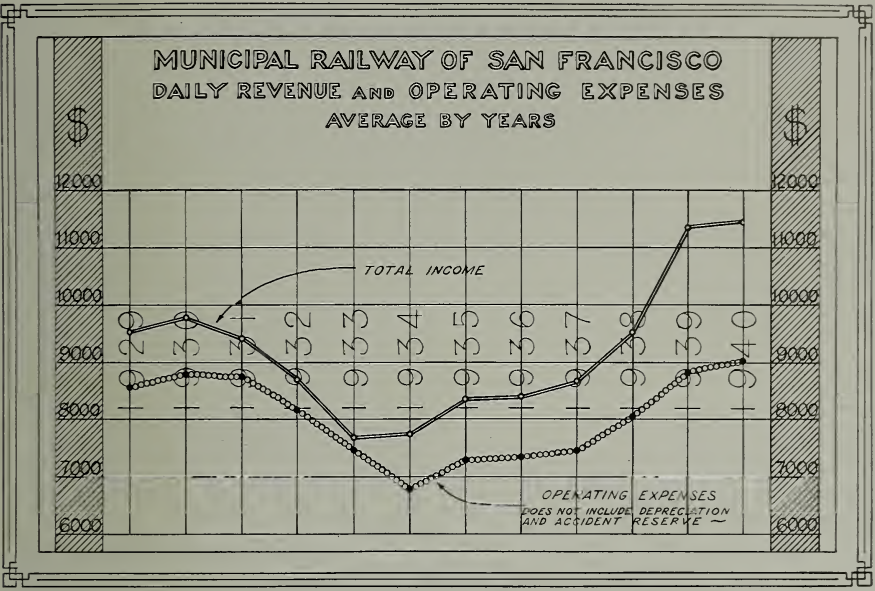
Steam shovel excavating for tracks during reconstruction between Larkin and Hyde streets.

The total mileage operated by the Municipal Railway cars and motor coaches during the year was 10,058,316 miles and is an increase of 248,248 miles or 2.53 per cent over the previous year.

Car and motor coach hours operated totaled 1,049,720 hours, an increase of 46,594 hours or 4.65 per cent as compared with the previous year. The total number of passengers carried was 111,302,499, an increase of 3,562,650 or 3.31 per cent over the previous year.

Motor coach operations for the year resulted in a loss of $147,540 as compared with a loss of $73,368 for the preceding year. This is an increase in net loss of $74,172 and is accounted for by an increase of $65,799 in revenue and an increase in expense of $139,971 over last year.

Motor coach mileage operated was 1,317,798 which was an increase of 547,877 miles over the previous year. Coach route No. 1, Park-Monterey Boulevard route, decreased 13,453 miles; Coach route No. 4, Embarcadero route, decreased 70 miles; Coach route No. 5, Marina route, increased 257 miles; Coach route No. 6, Eureka-Diamond-Mission route, increased 107,749 miles. The following five new motor coach routes operated mileages as follows: Route No. 7, Miraloma route, 77,945 miles; Route No. 8, Sunset-Parkside route, 75,521 miles; Route No. 9, Bayshore route, 101,499 miles; Route No. 10, Ocean View route, 159,022 miles;



Route No. 11, Telegraph Hill route, 39,406 miles. The total motor coach passengers carried was 7,517,799, an increase of 2,530,388 over last year.

Coach route No. 4, the Embarcadero route, operated at a profit of $4,484, which is the third year in the thirteen and one-half years of operation that this coach route has shown a profit and is due to the fact that the coaches and equipment in the capital setup for this route are fully depreciated, and no depreciation charge was included in the expenses for this year. In prior years when depreciation was being charged, the average loss was $6,688 per year. In accordance with an agreement between the City and County of San Francisco and the State Board of Harbor Commissioners, the Municipal Railway is subsidized for the loss in any one year up to $18,000. As no loss is shown for the fiscal year there is no payment due.

The exhibit of the Public Utilities Commission at the Golden Gate International Exposition which was installed in 1939 was continued for a second year in 1940. Included in the exhibit there are portrayed in graphs and pictures many facts pertaining to the Municipal Railway's operation and accomplishments. Added to this year's exhibit were two fine models of street cars—one of the old type and one of modern type, both in the new blue and gold colors.

In 1938, in accordance with the provisions of Section 128 of the charter, a survey of the Municipal Railway properties as of June 30, 1938, for the purpose of determining the amount of a reasonable annual depreciation provision, was made by accountants and engineers. As a result of this survey certain basic rates of depreciation and lives of properties were established. Application of these rates and property lives to the cost of road and equipment as of June 30, 1939, was made and resulted in a provision for depreciation for the fiscal year 1939-1940 of

TYPICAL BUS ROUTE UNIT

View of one of several new White transit coaches displaying newly adopted operator's uniform.

$378,370, which is 3.66 per cent of the cost of road and equipment as of June 30, 1939. See Schedule II of this report. As of June 30, 1939, the balance in the depreciation reserve was $6,409,865.

Twenty-Seven and One-Half Years' Operation:

The Municipal Railway at the close of this fiscal year on June 30, 1940, had completed twenty-seven and one-half years' operation. The total income from all sources from the start of operations on December 28, 1912, to June 30, 1940, amounted to $87,647,391, which amount includes $5,481,000 received from sale of bonds, $1,568,262 contributed, $670,408 interest received on bonds owned and daily cash balances, $70,229 received as subsidy from the Board of State Harbor Commissioners, and $318,490 miscellaneous profit and loss items. Passenger and other revenue totaled $79,539,002.

The total expenditures from start of operations, December 28, 1912, to June 30, 1940, were $70,473,586, of which operating expenses amounted to $64,046,092, bond interest charges $4,294,851, payments for injuries and damages $1,984,204, and miscellaneous profit and loss charges of $148,439. Bonds totaling $4,181,000 were retired out of a total of $5,481,000 issued.

Road and equipment purchased amounted to $11,821,627, of which $5,481,000 was derived from moneys received from bond sales, $4,866,649 from earnings and contributions, and $1,473,978 from the reconstruction and replacement fund.

Road and equipment retired totaled $1,164,542, leaving a balance of $10,657,085 on hand and in use.

At June 30, 1940, net cash, receivables and stores on hand, after deducting all liabilities, resulted in net free assets in the amount of $1,395,925.

In the twenty-seven and one-half years of operation, the Municipal Railway carried 1,990,282,961 passengers. Passenger car and motor coach miles operated totaled 223,901,810, and car and motor coach hours operated totaled 23,262,973.

ORGANIZATION AND PERSONNEL

Management

Fred Boeken	Manager
Wm. H. Scott	Acting Manager

Transportation

Eugene W. Clisbee	Superintendent of Transportation
Duke C. Ormsby	Assistant Superintendent of Transportation
Thos. A. Cox	Division Superintendent
Lawrence G. Marshall	Division Superintendent
Wesley R. Mason	Senior Instructor
Joseph D. Brogan	Supervisor of Schedules
John Casey	Assistant Supervisor of Schedules

Claims

Thos. B. Johnson	Claims Adjuster

Maintenance

Wm. C. Bendel	Superintendent of Equipment and Overhead Lines
Daniel P. Haggerty	Asst. Superintendent of Equipment and Overhead Lines
Frank J. Sheehan	Maintenance of Way Engineer

Accounting

Geo. C. Quinn	Senior Accountant
Melvin F. Kraut	Accountant
Merlin L. Henry	Timekeeper

Auditing and Accounting:

The accounts of the Municipal Railway are maintained in accordance with the forms and requirements of the State Railroad Commission insofar as these are applicable to publicly owned and operated utilities, and also in accordance with Section 64 of the charter of the City and County of San Francisco. The centralized control system installed by the controller has been merged with these accounts,

GEARY CARBARN PAINT SHOP
Here at frequent intervals the new blue and gold colors of Municipal Railway are applied to the system's once-gray cars.

with the result that no obligation may be incurred without prior certification of the controller that funds are available to discharge said obligation when it becomes due.

The cash balances of the Municipal Railway funds were verified in the treasurer's office as of June 30, 1940, and with the exception of settlements for injuries and damages provision has been made for all ascertained liabilities outstanding on June 30, 1940.

The accounts and activities of the Municipal Railway are audited currently by the Municipal Railway auditing staff, and frequent audits on various phases of the railway operation are made by forces of the controller's office. In addition to the above, an annual audit is made by a private certified public accounting firm.

Maintenance of Track and Roadway:

The usual high standard of maintenance in effect on the Municipal Railway's properties has been maintained during the fiscal year with the result that on general maintenance and small replacements 1,200 lineal feet of single track was reconstructed, 70,729 square feet of concrete paving base seven inches deep was placed, and 114,030 square feet of asphalt paving renewed. The thermit welding process of repairing broken rails was continued during the year, and a total of 238 welds was made under general maintenance.

During the year 2.32 miles of overhead trolley wire was replaced at a cost of $3,504.

In addition to the above there was performed during the year or contracted for under contracts numbers 184 and 176 and replacement jobs numbers R. J. 1374 and R. J. 1380 the following track work:

17,459	lineal feet of single track reconstruction
170,858	square feet of concrete paving base seven inches deep
177,768	square feet of asphalt paving
626	thermit weld joints

New Construction and Additions

Major items under the above classification were as follows:

Under extension and betterment jobs No. 239 and No. 239A provision was made in the amount of $112,000 for the construction of pole lines, feeders, overhead wiring, storage and service structures for the Howard Street trackless trolley line. The amount expended for this work including work performed under contract No. 186 to June 30, 1940, was $35,820. No further work can be performed pending a court decision on a taxpayer's suit questioning the legality of the expenditure.

Under extension and betterment job No. 238, provision in the amount of $116,000 was made for the purchase of nine trackless trolley coaches for the Howard Street trackless trolley line. Purchase order was drawn for the coaches and incidental expenditures in the amount of $3,015 were made, but the job is now held up pending adjudication of the taxpayer's suit previously mentioned.

Under extension and betterment job No. 240, eight waiting stations at various locations on the Municipal Railway lines were constructed. The total cost was $7,600, of which the amount of $2,282 was expended by the Municipal Railway, and an appraised value of $5,318 placed on materials and services furnished by the W. P. A.

Under extension and betterment jobs No. 241 and 241A, new offices on the third floor at 2600 Geary Boulevard, comprising two large and two medium sized rooms were constructed, and three lavatories were improved, and 1,705 square feet of additional office space was provided. Total cost was $11,431.

Under extension and betterment jobs No. 243 and No. 243A, a block of land 200 feet by 200 feet on the south side of Seventeenth Street between York Street and Bryant Street was purchased for an addition to the storage yard. York Street was officially closed providing an additional area of 80 feet by 400 feet, making the total area of storage yard 280 feet by 400 feet. The total cost was $42,787.

Under extension and betterment job No. 244, providing for grading and construction of the new Seventeenth Street storage yard, total expenditures made including contract No. 185 amounted to $12,419 to June 30, 1940. Completion of this work is held up pending outcome of a taxpayer's suit.

Under extension and betterment jobs No. 245 and No. 245A, ten single deck transit type motor coaches were ordered. The coaches, though ready, cannot be delivered pending outcome of previously mentioned taxpayer's suit. Incidental costs paid to June 30, 1940, were $954. A complete statement of expenditures for new construction and new equipment follows:

STATEMENT OF EXPENDITURES FROM OPERATING FUND OR CONTRIBUTED FOR ADDITIONS, BETTERMENTS AND NEW CONSTRUCTION

Amount Expended 1938-1939 (Incomplete Jobs)	$1,846
Amount Expended 1939-1940	117,206
Amount Contributed by W. P. A. (Appraised Value)	5,318
Total	$124,370

The various jobs and items making up this total are listed below:

Construction Job No. 142—Construction of elevator position signals in Forest Hill Station. Total cost		$240
Extension and Betterment Job No. 237—Construction of bus garage including engineering costs—Incomplete—Cost to June 30, 1940		369
Extension and Betterment Job No. 238—Purchase of 9 trackless trolley coaches for Howard Street trolley bus line. Incomplete—Cost to June 30, 1940		3,015
Extension and Betterment Jobs No. 239 and No. 239A—Municipal Railway Contract No. 186—Construction pole lines, feeders, overhead wiring, storage and service structures for Howard Street trackless trolley line—Incomplete—Cost to June 30, 1940		35,820
Extension and Betterment Job No. 240—Construction of 8 waiting stations at various locations on the Municipal Railway lines.		
Amount contributed by W. P. A. as appraised	$5,318	
Amount expended by Municipal Railway	2,282	
Total cost		7,600
Extension and Betterment Jobs No. 241 and No. 241A—Construction of additional new offices on third floor of building at 2600 Geary Boulevard. Total cost		11,431
Extension and Betterment Jobs. No. 243 and No. 243A—Purchase of land and expenses in connection therewith for extension of Seventeenth Street storage yard. Total cost		42,787
Extension and Betterment Job No. 244—Municipal Railway Contract No. 185—Grading and construction of Seventeenth Street storage yard—Incomplete—Cost to June 30, 1940		12,419
Extension and Betterment Jobs No. 245 and No. 245A—Purchase of 10 single deck transit type motor coaches including engineering—Incomplete—Cost to June 30, 1940		954
Extension and Betterment Job No. 246—Construction of negative cable across Golden Gate Park between Nineteenth Avenue and Irving Street and Nineteenth Avenue and Balboa Street. Total cost		982
Extension and Betterment Job No. 247—Additional feeders on north side of Taraval Street between Twentieth and Forty-sixth Avenues—Incomplete—Cost to June 30, 1940		3,166
Purchase of one new Oldsmobile coupe		898
Purchase of miscellaneous office machines and furniture		2,362
Purchase of miscellaneous track and roadway equipment		1,761
Purchase of miscellaneous shop equipment		566
Total		$124,370

Reconstruction and Replacements:

Major track reconstruction jobs during the year were as follows:

Under contract No. 182, replacement job No. 1357, two miles of track in the Twin Peaks tunnel were reconstructed at a total cost of $39,552. Fifty-three per cent of this work was completed in the previous year.

Under contract No. 184, replacement job No. 1374, 5,259 feet of single track was reconstructed on Geary Boulevard between Masonic Avenue and Jordan Avenue at a total cost of $63,177.

Under contract No. 176, replacement job No. 1380, provision was made for the replacement of 12,200 feet of single track on Geary Street between Powell Street and Fillmore Street including crossings at Powell Street, Jones Street, Leavenworth Street, and Larkin Street, branchoff at Polk Street and crossover west of Van Ness Avenue. The total funds provided for this work was $204,000, and work was about fifty per cent complete as of June 30, 1940. Recorded costs to date total $77,278.

Under replacement job No. 1346, four obsolete Union Street street cars and one old damaged type "B" car were replaced by five new modern type street cars. The total cost to June 30, 1940, was $110,881. A complete statement of expenditures for reconstruction and replacements for all classes of Municipal Railway properties follows.

STATEMENT OF EXPENDITURES FOR RECONSTRUCTION AND REPLACEMENTS

Amount Expended 1937-1938 (Incomplete Jobs)	$33
Amount Expended 1938-1939 (Incomplete Jobs)	33,030
Amount Expended 1939-1940 Reconstruction and Replacement Fund (Exhibit "C")	286,743
Amount Expended 1939-1940 Operating Fund	1,466
Total	$321,272

The various jobs making up this total are listed below:

Replacement Job No. 1301—Crossing—Cabrillo and La Playa Streets. Total cost		$979
Replacement Job No. 1305—Ties and ballast—Fifteenth and West Portal Avenues. Total cost		897
Replacement Job No. 1346—Replacement of five street cars. Cost to June 30, 1940		110,881
Replacement Job No. 1357—Contract No. 182—Relaying 2 miles of track in Twin Peaks tunnel. Total cost		39,552
Replacement Job No. 1358—Crossing—Market and Fourth Streets.		
Total cost	$742	
Less one-half paid by Market Street Railway Company	371	371
Replacement Job No. 1362—1,000 feet feeder cable—Twin Peaks tunnel. Total cost		1,881

Replacement Job No. 1374—Contract No. 184—Reconstructing tracks, Geary Boulevard between Masonic and Jordan Avenues. Total cost		63,177
Replacement Job No. 1375—Crossing—Geary and Powell Streets. Total cost		1,905
Replacement Job No. 1380—Contract No. 176—Reconstructing tracks—Geary between Powell and Fillmore Streets—Estimated cost $204,000. Cost to June 30, 1940		77,278
Replacement Job No. 1383—Frog in branchoff Market Street into Eleventh Street. Total cost		423
Replacement Job 1384—Crossing—Van Ness Avenue and McAllister Street. Total cost		760
Replacement Job No. 1385—Rails in curved track—Columbus Avenue and North Point Street. Total cost		2,564
Replacement Job No. 1386—Crossing replaced by girder rails—Eleventh and Howard Streets. Total cost		915
Replacement Job No. 1387—Frog—Market Street into Van Ness Avenue. Total cost		619
Replacement Job No. 1388—Skew crossing—Market and Church Streets. Total cost		1,694
Replacement Job No. 1391—Rail in middle loop section "E"—Ferry. Total cost	$947	
Less 50.84% paid by Market Street Railway Company	481	466
Replacement Job No. 1392—Crossing—Stockton and O'Farrell Streets. Total Cost		1,268
Replacement Job No. 1395—Frog in branchoff—Van Ness Avenue and Vallejo Street. Total cost		534
Replacement Job No. 1396—Switch and connecting rail in branchoff—Geary Boulevard and Masonic Avenue. Total cost		314
Replacement Job No. 1399—Frog and rail in middle loop of Ferry. Total cost	$767	
Less 50.84% paid by Market Street Railway Company	390	377
Replacement Job No. 1402—Crossing on Market Street with spur track of Market Street Railway Company entering Valencia Street yard. Total cost		551
Replacement Job No. 1403—Frog in branchoff—Market Street into Geary Street. Total cost		550
Miscellaneous Replacement Jobs—Paving. Total cost		6,294
Miscellaneous Replacement Jobs—Overhead wiring. Total cost		6,088
Miscellaneous Replacement Jobs—Typewriters and calculating machines. Total cost		934
Total		$321,272

Transportation:

The usual high standard of service has been furnished by the transportation department, and every effort has been made to adjust service to meet the unusual heavy passenger traffic conditions due to the continued 5 cent fare on the Municipal Railway lines and to travel to the Golden Gate International Exposition. On Geary Street additional difficult traffic conditions resulted due to reconstruction work on tracks from Powell Street to Fillmore Street and from Masonic Avenue to Jordan Avenue. As in the previous years, schedules were arranged to serve both the Bay Bridge terminal and the Ferry terminal to the best advantage with present facilities.

During the year 166 changes were made in the time tables of the various lines. Car hours operated decreased 2,995 car hours due to the substitution of motor coaches for street cars on line "M." Motor coach hours operated increased 49,589 hours, due principally to the extension of Route No. 6 to Twenty-third Street and South Van Ness Avenue and to the inauguration of motor coach lines on route No. 7, Miraloma route; route No. 8, Sunset-Parkside; route No. 9, Bayshore-Portola Heights; route No. 10, Ocean View; and route No. 11, Telegraph Hill. On July 2, 1940, motor coach operation was to have been inaugurated on route No. 12, Howard Street route, pending delivery of trolley coaches originally intended for this route. This route operates from Army Street and South Van Ness Avenue to the Ferry. Elsewhere in this report will be found detailed routing of all the above routes.

The total number of passengers carried during the fiscal year was 111,302,499, an increase of 3,562,650 over the previous year, making the third consecutive fiscal year in which all previous records for passengers carried were exceeded.

Maintenance of Equipment:

The equipment of the Municipal Railway has been maintained in first-class condition, forty-two car bodies and three motor coaches having been overhauled and painted, and thirty-six cars rewheeled. Motors totaling 384 have been overhauled and repaired as were 42 units of electrical control apparatus.

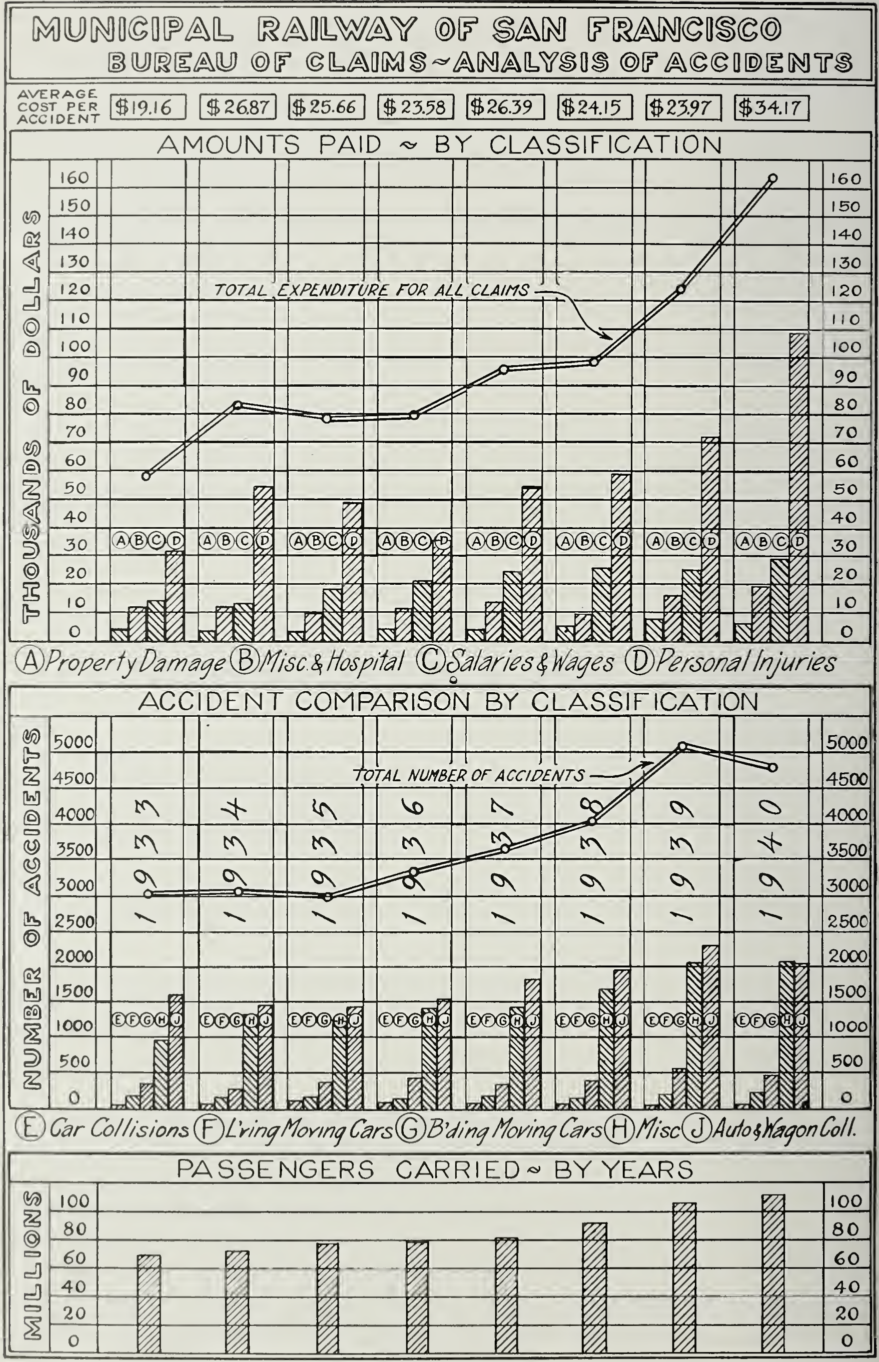
During the year 54 propulsion armatures and seven air compressor armatures were rewound. The usual policy of cleaning cars daily and disinfecting weekly has been maintained throughout the year.

In connection with the painting of street cars, a change in color was made from the old "municipal gray" to a combination of blue and gold, duplicating the color scheme on the five new modern street cars placed in operation in December, 1939.

Bureau of Claims:

During the fiscal period July 1, 1939, to June 30, 1940, the street cars and coaches of the Municipal Railway carried a total of 111,302,499 passengers, an increase of 3,562,650 or 3.31 per cent over the preceding period. With only 4,801 accidents reported, the ratio of accidents to the number of passengers carried, .00004, indicates a degree of safety and service to the citizens of and visitors to San Francisco, equalled by few municipalities in the country.

Special consideration is given the circumstance of reconstruction of the roadbed on Geary Boulevard between Masonic Avenue and Jordan Avenue and on Geary



MUNICIPAL RAILWAY OF SAN FRANCISCO
BUREAU OF CLAIMS ~ ANALYSIS OF ACCIDENTS

AMOUNTS PAID ~ BY CLASSIFICATION

ACCIDENT COMPARISON BY CLASSIFICATION

PASSENGERS CARRIED ~ BY YEARS

Street between Powell Street and Van Ness Avenue. This reconstruction was done during the height of tourist influx and progress of the Golden Gate International Exposition. It is a tribute to the maintenance of way department of the railway and to the skill of the operators of the Municipal Railway street cars that the accidents on or near the route of reconstruction were comparatively few and of no fatal consequence.

The extension of new motor coach routes has increased the traffic hazards throughout the city, yet the actual number of accidents has decreased 5.73 per cent since June 30, 1939.

Accidents have been classified as in previous reports as follows:

> Those in which the Municipal Railway was directly involved and those occurring on or near the right-of-ways, but in which the Municipal Railway cars were not directly involved.

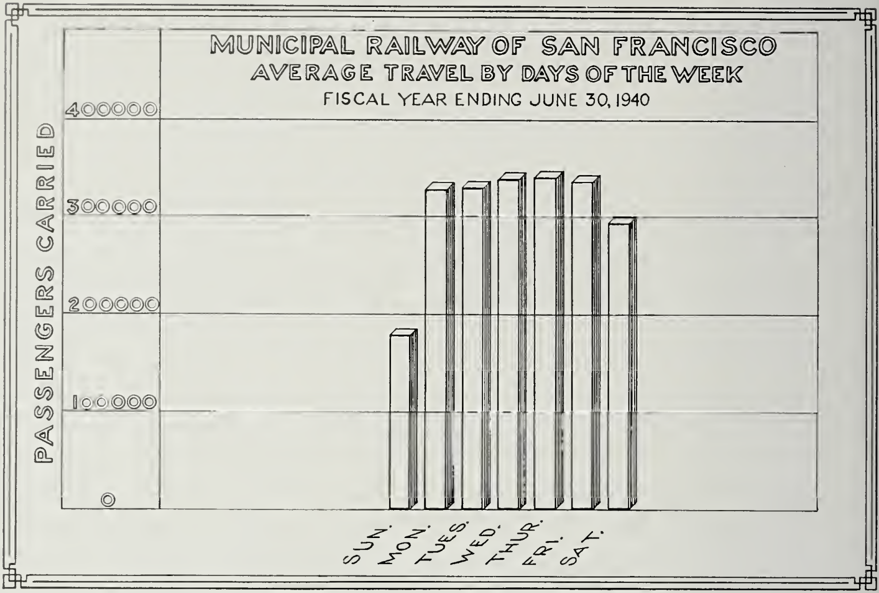
The following statement shows the accidents filed during the year so classified:

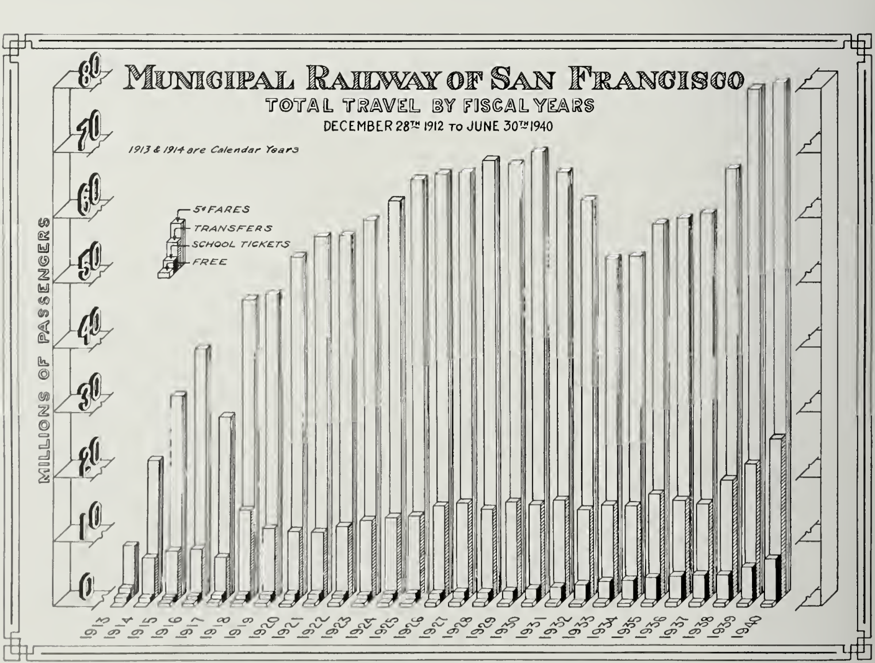
CLASSIFICATION OF ACCIDENTS

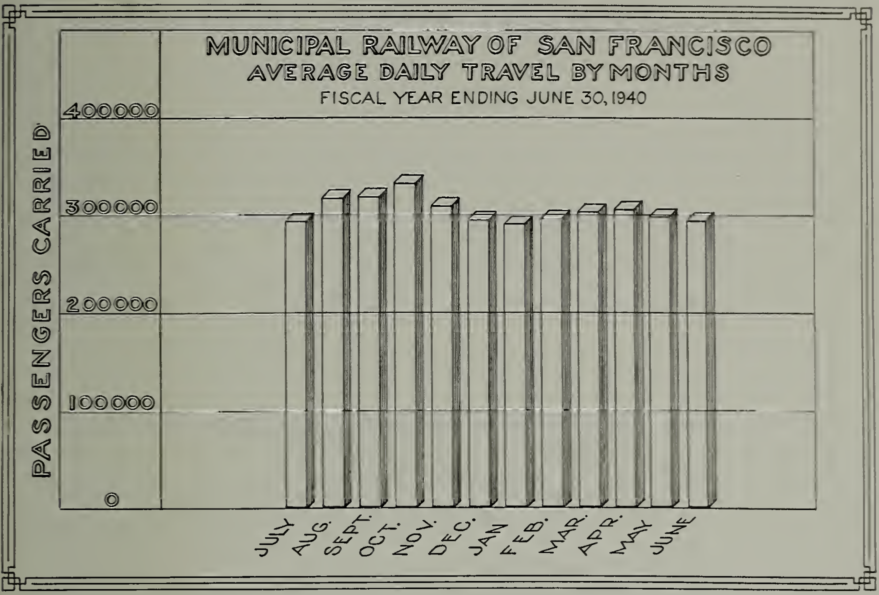
Municipal Railway Involved	Number of Accidents
1. Automobile collisions	2,030
2. Injuries to passengers	1,579
3. Injuries to automobile occupants	(34)
4. Injuries to pedestrians	84
5. Damage to wearing apparel	179
6. Street car collisions	48
7. Broken windows	209
8. Deaths	4
9. Employees injured	117
10. Miscellaneous	469
Near Track	
Municipal Railway Not Involved	
11. Automobile collisions	26
12. Pedestrians struck by automobiles	56
Total	4,801

The bureau of claims has continued its policy of endeavoring to have an investigator visit every person who has met with an injury by reason of the operation of the Municipal Railway cars or motor coaches, regardless of the liability for that injury. It has sought to impress those visiting or communicating with the bureau that the Municipal Railway has a scrupulous concern for the welfare of the citizens of San Francisco as regards their safety as passengers on the Municipal Railway street cars or motor coaches or on the streets traversed by its lines. At the same time, however, the bureau of claims is watchful of the property and resources of this important utility against fraudulent claims for alleged injuries or damages.

The bureau of claims under the direction of the manager of utilities has continued its coöperation with other bureaus and departments in the investigation and settlement of claims made against all the utilities under the jurisdiction of the Public Utilities Commission.


MUNICIPAL RAILWAY OF SAN FRANCISCO
AVERAGE TRAVEL BY DAYS OF THE WEEK
FISCAL YEAR ENDING JUNE 30, 1940
PASSENGERS CARRIED
400000
300000
200000
100000
0
SUN.
MON.
TUES.
WED.
THUR.
FRI.
SAT.


MUNICIPAL RAILWAY OF SAN FRANCISCO
TOTAL TRAVEL BY FISCAL YEARS
DECEMBER 28TH 1912 TO JUNE 30TH 1940
1913 & 1914 are Calendar Years
5¢ FARES
TRANSFERS
SCHOOL TICKETS
FREE
MILLIONS OF PASSENGERS
80
70
60
50
40
30
20
10
0
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940



COMPARATIVE STATEMENT OF ACCIDENT REPORTS
FISCAL YEARS ENDED JUNE 30, 1940, AND JUNE 30, 1939

	Geary Division		17th Street Division	
	Fiscal Year Ended June			
	1940	1939	1940	1939
Street car collisions	21	24	27	36
Auto and wagon collisions	1,012	1,253	1,018	1,051
Boarding moving cars	237	245	232	266
Leaving moving cars	117	121	86	77
Miscellaneous	1,152	1,038	899	982
Total	2,539	2,681	2,262	2,412

Court Statistics:

During the fiscal year ended June 30, 1940, cases tried in the several courts continued to show very satisfactory results in proportion of verdicts in favor of the Municipal Railway notwithstanding several cases wherein plaintiffs were awarded amounts considerably greater than ordinarily awarded.

	No. of Cases	Amount Sued For	Verdict For Claimant	Percentage Paid on Amount of Claim
Superior Court	15	$348,108.72	$33,340.00	9.58%
Municipal Court	12	18,758.93	2,698.75	14.39%
Small Claims Court	8	350.65	101.40	28.92%
Total	35	$367,218.30	$36,140.15	9.84%

COMMENTS ON FINANCIAL STATEMENTS

GENERAL BALANCE SHEET

EXHIBIT "A"

For the purpose of more clearly portraying the assets and liabilities of the Municipal Railway, the balance sheet in this year's report is shown in narrative form instead of the conventional form:

PROPERTIES—LESS DEPRECIATION		$4,160,923.48
Composition of this amount is as follows:		
Road and Equipment	$10,515,044.30	
Analysis of this amount is given in Schedule I which reflects the additions and retirements for the fiscal year. In accordance with the survey of properties for depreciation purposes the sum of $378,369.91 has been reserved for depreciation during the current year.		
New Construction in Progress	55,743.75	
This item represents costs in connection with the construction of Howard Street trolley bus line, grading and construction of the Seventeenth Street storage yard, feeders on Taraval Street between Twentieth and Forty-sixth Avenues and preliminary engineering costs for purchase of buses and construction of a bus garage which are incomplete as of June 30, 1940.		
	$10,570,788.05	
Deduct:		
Reserve for Accrued Depreciation	6,409,864.57	
This is the amount charged to operations and credited to depreciation of properties from December 28, 1912, to June 30, 1940, less charges for retirements. Included in the above, in addition to the regular charge for depreciation during the year, is $1,126.48 which resulted from an audit examination of W. P. A. work, the charge being made to surplus.		
Net value of properties as above	$4,160,923.48	
CASH WITH THE TREASURER		$1,398,572.99
The funds comprising this amount are as follows:		
Municipal Railway Bond Redemption Fund	$400.00	
Municipal Railway Bond Interest Fund	11,507.50	
The above two funds are maintained by transfer to meet principal maturities and bond interest as they become due.		
Municipal Railway Operating Fund	995,975.48	
This fund is maintained for payment of normal expenses of operation and also contains unallocated reserves of the railway.		

Accident Reserve Fund		317.50	

An analysis of the accident reserve fund is shown in the statement of reserve funds Exhibit "C." The amount reserved for accidents during the current year was 3 per cent of the gross operating revenue.

Reconstruction and Replacement Fund		383,872.51	

For analysis of this fund see Exhibit "C." The balances in all of the above funds have been reconciled with the records of the treasurer of the City and County of San Francisco by the accounting staff of the Municipal Railway.

Revolving Fund		6,500.00	

This fund is maintained for payment of small accident claims and expenses in connection with special investigations. It is in the custody of the following officers:

Mr. Fred Boeken, Manager	$1,000.00		
Mr. Thos. B. Johnson, Claims Adjuster	5,500.00		
	$6,500.00		

These funds have been reconciled with certifications obtained from the depositary and found to be in balance.

Total Cash on Hand		$1,398,572.99	
MISCELLANEOUS ACCOUNTS RECEIVABLE			$8,386.68
Due from Pacific Gas & Electric Company:			
Pole Rental		$658.00	
Due from Market Street Railway Company:			
Track rental and proportion of tower expense at Bay Bridge terminal loop		3,471.58	
Due from R. C. Scott Advertising Company:			
Advertising in cars and buses		4,255.10	
Due from Shell Oil Company:			
Pole Rental		2.00	
INTERFUND ACCOUNTS RECEIVABLE			57,686.11
Due from General Fund—Mayor:			
Amount provided from Municipal Railway funds for plans in connection with the solution of traffic problems		$55,000.00	
Due from General Fund—Purchasing Department:			
Rental of lot at Jones and Jefferson streets		1,800.00	
Due from General Fund—Interest Receivable:			
Accrued interest due to the Municipal Railway for the period April, May and June, 1940, on the daily bank balances placed on deposit by the city treasurer. In accordance with Ordinance 9870 (N.S.) Municipal Railway funds are deposited with the treasurer who in turn places same on deposit with the various banks		886.11	
Total		$57,686.11	

INTRAFUND ACCOUNTS RECEIVABLE		$140,032.05

Amounts as follows are due between funds of the Municipal Railway:

Due to Reconstruction and Replacement Fund from Operating Fund for loan to purchase rails, etc.	$137,898.24
Due to Operating Fund from Reconstruction and Replacement Fund for labor and materials used on reconstruction and replacement jobs	2,133.81
Total	$140,032.05

DEFERRED CHARGES		718,524.45
Materials and Supplies at Carhouse and Storage Yard	$272,438.92	

A physical inventory was taken of the materials at the storage yard by members of the engineering department. Minor over and short adjustments were made to bring the physical count into agreement with the general ledger account.

A perpetual inventory is maintained of the materials in the carhouse storeroom which results in material counts being made at frequent intervals and adjustments as necessary being made throughout the year. Materials on hand as of June 30, 1940, were found to be in accord with the records, and all prices, extensions and footings of the inventory have been checked.

Materials and Supplies Contributed	336.69

This represents the balance of stores on hand which were received by reason of the abandonment of the Gough Street line and Howard Street line by the Market Street Railway Company.

Replacement Jobs in Progress	86,296.80
Contract, P. O., S. O., and O. W. Liability (Contra)	359,452.04

This item represents an unadjusted debit for contract, purchase order, service order, and order for work liability on which no materials have been delivered nor services performed, but contracted for and is offset under accounts payable by a similar amount.

Total	$718,524.45

BONDED DEBT		$1,300,400.00
Funded Debt Unmatured	$1,300,000.00	

The following is a recapitulation of the unmatured funded debt:

Municipal Railway 5%—1913

Total issue	$3,500,000.00
Matured to June 30, 1940	2,200,000.00
Unmatured June 30, 1940	1,300,000.00
Date of final maturity	Dec. 1, 1952

Matured Funded Debt Unpaid	400.00	

Bonds in the amount of $400.00 had matured prior to June 30, 1940, but had not been presented for redemption on that date.

Total	$1,300,400.00	

BOND INTEREST PAYABLE		11,507.50

Interest coupons matured but not presented for payment on June 30, 1940.

BOND INTEREST PAYABLE—ACCRUED		5,416.66

Interest accrued to June 30, 1940, but not due until December 1, 1940.

ACCOUNTS PAYABLE		517,945.92

This amount consists of the following:

Unpaid Warrants Operating Fund	$113,127.30	
Invoices Operating Fund not vouched by Controller	33,710.72	
Invoices Reconstruction and Replacement Fund not vouched by Controller	376.83	
Invoices Accident Reserve Fund not vouched by Controller	132.50	
Contingent Payrolls—Operating Fund	4,121.15	
Contract Payments withheld Operating Fund	2,465.98	
Contract Payments withheld Reconstruction and Replacement Fund	4,559.40	
Contract, P. O., S. O. and O. W. Liability (Contra)	359,452.04	

Items contracted for but for which no materials have been delivered nor services rendered.

Total	$517,945.92	

INTERFUND ACCOUNTS PAYABLE		$164,540.14

This item represents accounts payable to other city departments as of June 30, 1940. See Exhibit "F."

INTRAFUND ACCOUNTS PAYABLE (CONTRA)		140,032.05

Amount due between funds of the Municipal Railway. See Exhibit "E."

ACCIDENT AND OTHER RESERVES		61,369.17

Accident Reserve

The following is an analysis of this account for the current fiscal year:

Balance June 30, 1939	$98,785.54	
Addition to reserve during year, 3% of gross revenue	125,471.75	
Total	$224,257.29	
Less claims paid, legal and other expense	164,026.76	
Balance June 30, 1940	$60,230.53	

Represented as follows:

Accident Reserve Fund Cash	$317.50	
Due from Municipal Railway Operating Fund	59,913.03	
	$60,230.53	
Reserve for Overhead		1,138.64

This is the reserve accumulated on bills rendered to city departments and others to cover vacation, sick leave, and compensation insurance costs.

Total	$61,369.17

SURPLUS JUNE 30, 1940 4,282,914.32

Surplus as shown in Exhibit "A" is composed of the following items:

Contributed Surplus	$1,530,544.19
From Operations at beginning of present fiscal year	2,389,004.72
	$3,919,548.91
Add surplus adjustments during the year applicable to prior years	32,986.46
	$3,952,535.37
From operations during fiscal year	324,981.09
Contributed during fiscal year	5,397.86
Total Surplus	$4,282,914.32

COMPARISON CHARGES—TAXES AND OTHER ITEMS $4,116,436.93

See Income Statement Exhibit "B."

The Municipal Railway being a municipally owned utility is not required to pay taxes other than use or sales taxes to the City and County of San Francisco or to the State of California. For comparative purposes, taxes and other items have been recorded as follows:

Taxes

State of California	$3,102,272.29
City and County of San Francisco Franchise	510,242.68
City and County of San Francisco Car License	35,988.75
City and County of San Francisco Local	446,868.43
Federal Income Tax	13,270.61
	$4,108,642.76

Services Furnished

Water furnished without charge by San Francisco Water Department	7,794.17
Total	$4,116,436.93

EXHIBIT "A"

BALANCE SHEET—JUNE 30, 1940

ASSETS

PROPERTIES	
(This is what it cost to build the Municipal Railway; of the total $10,515,044.30 has been spent for completed work and $55,743.75 on work not yet completed)	$10,570,788.05
The property has been reduced in value by the wearing out of equipment and tracks to the estimated amount of	6,409,864.57
	$4,160,923.48
CASH	
(We have cash deposited with the treasurer of the City and County of San Francisco totaling $1,398,572.99; of this $995,975.48 is to pay wages and salaries and for purchasing materials and supplies to operate the railway; $400.00 is reserved to pay back borrowed money now due but which the bond holders have not yet presented for payment; $11,507.50 is kept to pay interest on borrowed money which is due but which has not been presented to us by the bond owners for payment; $317.50 is kept to pay possible claims for accidents and for which claims have been filed; $383,872.51 is held to replace equipment, tracks, paving, and other properties of the railway as they wear out; $6,500.00 is available to the manager of the railway to pay small items arising from time to time in the operation of the railway. The sums are replaced in this revolving fund by the treasurer upon approval of the Public Utilities Commission and the controller)	1,398,572.99
MISCELLANEOUS ACCOUNTS RECEIVABLE	
(This is owed the railway by other persons for work it has done for them and which has not yet been collected)	8,386.68
INTERFUND ACCOUNTS RECEIVABLE	
(This is owed the railway by other city departments for rental of property, interest on daily balances and cash advanced for the betterment of the railway)	57,686.11
INTRAFUND ACCOUNTS	
(This has been expended or advanced for work on the railway but has not been collected from the railway fund responsible)	140,032.05
DEFERRED CHARGES	
(This is the amount expended for materials and supplies on hand but not yet used, for cash or credit advanced for work in progress, and for contract and purchase order commitments)	718,524.45
Properties and cash required to operate the railway	$6,484,125.76

LIABILITIES

BONDED DEBT	
(What the Municipal Railway has borrowed in bonds not yet due but which are being repaid at the rate of $100,000.00 per year.) ($400.00 due but not presented for payment)	$1,300,400.00
BOND INTEREST PAYABLE	
Matured Coupons Unpaid	
(This is the money due bond holders for interest who have not yet presented their bond coupons for payment)	11,507.50
Accrued—Not Due	
(The monthly amount of interest on borrowed money not due until December 1, 1940, which is recorded on the books each month)	5,416.66
ACCOUNTS PAYABLE	
(This is the money the railway owes for wages, materials, etc., purchased but not yet paid and for contract and purchase order commitments)	517,945.92
INTERFUND ACCOUNTS—SCHEDULE ANNEXED	
(This is due other departments by the railway for services performed but not yet paid for)	164,540.14
INTRAFUND ACCOUNTS (CONTRA)	
(This is due from one fund of the railway to another for work performed and is balanced by the same sum in assets)	140,032.05
ACCIDENT AND OTHER RESERVES	
(This is a reserve to meet obligations now existing on account of claims for injuries and damages, and overhead on invoices)	61,369.17
SURPLUS JUNE 30, 1940	
(This is the ownership of the people of San Francisco in the Municipal Railway. It should be understood that most of this is invested in the system and is not in cash)	4,282,914.32
Total	$6,484,125.76

EXHIBIT "B"

COMPARATIVE INCOME STATEMENT FOR JUNE, 1940, AND TWELVE MONTHS OF FISCAL YEAR 1939-1940

	Month of June				Twelve Months to June 30				Cumulative from December 28, 1912, to June 30, 1940	
	1940	%	1939	%	1940	%	1939	%		%
REVENUE										
Passenger Revenue	$329,534.83	100.00	$352,875.25	100.00	$4,135,902.62	100.00	$4,107,365.10	100.00	$79,045,338.04	100.00
Advertising Revenue	2,127.55		1,942.80		25,530.63		23,313.66		419,114.52	
Miscellaneous	3,847.35		1,859.15		20,958.36		12,869.86		74,549.31	
Total Revenue	$335,509.73		$356,677.20		$4,182,391.61		$4,143,548.62		$79,539,001.87	
OPERATING EXPENSES										
I. Way and Structures	$14,318.51	4.35	$17,491.55	4.95	$179,158.04	4.33	$183,515.51	4.48	$3,211,639.86	4.06
II. Equipment	20,783.84	6.31	17,985.75	5.10	227,222.22	5.49	208,097.37	5.06	4,788,432.97	6.06
III. Power	46,105.62	13.99	46,850.62	13.28	550,533.44	13.31	560,433.34	13.64	11,468,038.44	14.51
IV. Conducting Transportation	169,908.87	51.56	166,352.52	47.14	2,042,104.87	49.37	1,979,376.25	48.19	40,146,311.89	50.79
VI. General and Miscellaneous*	26,108.68	7.92	24,989.30	7.08	303,036.91	7.33	284,460.51	6.93	4,431,669.00	5.60
Total Operating Expense†	$277,225.52	84.13	$273,669.74	77.55	$3,302,055.48	79.83	$3,215,882.98	78.30	$64,046,092.16	81.02
PROFIT FROM OPERATIONS	$58,284.21		$83,007.46		$880,336.13		$927,665.64		$15,492,909.71	
DEDUCT PROVISION FOR										
Accidents	$10,065.29	3.05	$10,700.32	3.03	$125,471.75	3.03	$124,306.46	3.02	$2,044,434.54	2.59
Depreciation	31,530.83	9.57	28,606.73	8.11	378,369.91	9.15	343,280.73	8.36	7,349,660.85	9.30
Total Deductions	$41,596.12	12.62	$39,307.05	11.14	$503,841.66	12.18	$467,587.19	11.38	$9,394,095.39	11.89
INCOME FROM OPERATIONS	$16,688.09		$43,700.41		$376,494.47		$460,078.45		$6,098,814.32	
NON-OPERATING INCOME										
Income from Securities Owned	....		....		....		....		$597,037.91	
Interest on Bank Balances	$886.11		$764.24		$3,675.82		$3,102.47		73,370.19	
Subsidy from Harbor Commission	....		....		....		....		70,229.71	
Other Income (P. & L.)	....		103.28		11,894.13		1,177.50		318,489.95	
Total Non-Operating Income	$886.11		$867.52		$15,569.95		$4,279.97		$1,059,127.76	
GROSS INCOME	$17,574.20		$44,567.93		$392,064.42		$464,358.42		$7,157,942.08	
DEDUCTIONS FROM GROSS INCOME										
Interest on Funded Debt	$5,416.66	1.64	$5,833.33	1.65	$67,083.33	1.62	$72,083.33	1.75	$4,294,850.90	5.43
Miscellaneous Debits (P. & L.)	....		....		....		....		148,438.66	.19
Total Deductions from Gross Income	$5,416.66	1.64	$5,833.33	1.65	$67,083.33	1.62	$72,083.33	1.75	$4,443,289.56	5.62
NET INCOME	$12,157.54	3.69	$38,734.60	10.98	$324,981.09	7.86	$392,275.09	9.55	$2,714,652.52	3.43

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*Sick Leave Costs Included:

Month of June, 1940	$4,169.19
Twelve Months to June 30, 1940	47,668.93

†Includes Penalty Overtime and Matching Contributions (January to June) $2,049.40. (Bill No. 744, Ordinance No. 679.)

COMPARISON CHARGES

Month of June, 1940	$10,576.62
Twelve Months to June 30, 1940	132,111.89
December 28, 1912, to June 30, 1940	4,116,436.93

(This is what the railway would pay in taxes if privately owned, but not paid because it is owned by the people.)

EXHIBIT "C"

RESERVE FUNDS OF THE MUNICIPAL RAILWAY—JUNE 30, 1940

ACCIDENT RESERVE FUND

Total paid in and/or credited to fund May 1, 1926, to June 30, 1939		$1,346,999.04	
Expended for Injuries and Damages May 1, 1926, to June 30, 1939		1,248,213.50	
Unencumbered Balance June 30, 1939			$98,785.54
Due from Mun. Ry. (Op.) Fund July 1, 1939, to June 30, 1940.	$125,471.75		
Less Charges for Injuries and Damages paid out of Oper. Fund July 1, 1939, to June 30, 1940	164,026.76		*38,555.01*
Unencumbered Balance at June 30, 1940			$60,230.53
The Unencumbered Balance consists of:			
Cash	$317.50		
Due from Operative Fund	59,913.03		
Total			$60,230.53

RECONSTRUCTION AND REPLACEMENT FUND

Total paid into and/or owing to fund May 1, 1926, to June 30, 1939		$1,708,854.37	
Expended for replacements May 1, 1926, to June 30, 1939	$1,187,234.76		
Expended and charged to surplus May 1, 1926, to June 30, 1939.	15,097.27		
Appropriated to Operating Fund—Howard St. trolley bus line	84,000.00		
Appropriated to General Fund—traffic survey	55,000.00	1,341,332.03	
Unencumbered Balance June 30, 1939			$367,522.34
Balance due from Municipal Railway Operating Fund, July 1, 1939, to June 30, 1940		0	
Add cash transfers from Operating Fund, July 1, 1939, to June 30, 1940		$343,281.00	
Total paid into and/or owing to fund July 1, 1939, to June 30, 1940		$343,281.00	
Less: Charges for replacements paid out of Operating Fund, July 1, 1939, to June 30, 1940	$2,133.81		
Charges for replacements paid out of Reconstruction and Replacement fund, July 1, 1939, to June 30, 1940	284,609.44	$286,743.25	
		$56,537.75	
Add: Return of Appropriation for Howard St. trolley bus line		84,000.00	
Net increase in fund July 1, 1939, to June 30, 1940			$140,537.75
Unencumbered Balance at June 30, 1940			$508,060.09
The Unencumbered Balance consists of:			
Cash		$383,872.51	
Due from Operative Fund		137,898.24	
Due to Operating Fund—Replacement Job Expenditures applicable to Fiscal Year 1939-1940		*2,133.81*	
Contract Payments—withheld		*4,559.40*	
Accounts Payable—General Creditors		*376.83*	
Due County Roads Fund—Bureau of Street Repair—Paving		*2,218.66*	
Due Public Utilities Commission—Bureau of Engineering—Services		*1,487.88*	
Due Department Public Works—Bureau of Engineering—Services		*2,934.08*	
			$508,060.09

Italic figures denote loss and deficiency.

SCHEDULE II

ANALYSIS OF RESERVE FOR DEPRECIATION AND RATES APPLICABLE TO FISCAL YEAR 1939-1940

Acct. No.	Account	Cost at June 30, 1939	% Rate of Depreciation for 1939-1940	Amount of Depreciation for 1939-1940
502	Right of Way	$169,839.07	....	....
503	Other Land Used in Municipal Railway Operations	265,490.48	....	....
504	Grading	524,869.53	1.920	$10,077.49
505	Ballast	366,215.82	2.500	9,155.40
506	Ties	197,801.77	3.850	7,615.37
507	Rails, Rail Fastenings and Joints	964,038.16	3.580	34,512.57
508	Special Work	367,502.02	5.440	19,992.11
510	Track and Roadway Labor	862,458.56	4.170	35,964.52
511	Paving	1,240,657.68	4.000	49,626.31
512	Roadway Machinery and Tools	23,111.54	4.746	1,097.04
513	Tunnels and Subways	14,987.49	3.529	528.97
515	Bridges, Trestles and Culverts	4,689.04	2.500	117.23
516	Crossings, Fences and Signs	46,075.71	2.035	937.89
517	Signals and Interlocking Apparatus	20,160.19	4.492	905.70
518	Telephone and Telegraph Lines	179.07	6.667	11.94
519	Poles and Fixtures	278,116.94	2.369	6,588.59
520	Underground Conduits	157,032.80	1.781	2,798.04
521	Distribution System	822,709.00	3.400	27,972.11
523	Shops and Carhouses	977,319.82	2.071	20,244.47
524	Stations, Miscellaneous Buildings and Structures	40,398.28	1.969	796.65
530-A	Passenger and Combination Cars, Electric	1,698,442.64	3.845	65,307.20
530-B	Passenger and Combination Cars, Buses	317,904.42	13.595	43,219.26
532-A	Service Equipment, Electric	13,871.11	2.359	327.22
532-B	Service Equipment, Automotive	34,418.56	8.040	2,767.49
533	Electric Equipment of Cars	841,975.83	3.936	33,143.70
536	Shop Equipment	43,730.06	3.772	1,649.54
537	Furniture	35,750.26	5.107	1,826.05
	Totals	$10,329,745.85	3.650	$377,182.86
	Plus 1938-1939 Adjustment			*1,187.05
				$378,369.91

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*Represents losses on retirements in 1938-1939.

SCHEDULE II—Continued

	Total Provision for Depreciation	Less Charges for Assets Retired	Balance
Fiscal Years Ended 1913 to 1939	$7,265,413.88	....	....
Add: Charges to Reserve on Account of Assets Retired June 1921 to June 1928	115,472.34	....	....
Adjustment per Appraisal of Properties as of June 30, 1938	590,255.23	....	....
Deduct: Amount Not Funded, 1933 to 1938	*1,000,976.99*	....	....
Per Report June 30, 1939	$6,970,164.46	$821,534.99	$6,148,629.47
Add Adjustment per Audit of W. P. A. Work as of June 30, 1939	1,126.48	....	1,126.48
Adjusted Balances as of June 30, 1939	$6,971,290.94	$821,534.99	$6,149,755.95
Year Ended June 30, 1940	378,369.91	118,261.29	260,108.62
	$7,349,660.85	$939,796.28	$6,409,864.57
	(Exhibit "B")		(Exhibit "A")

Italic figures denote loss and deficiency.

FIELD OPERATING STATEMENT

FISCAL YEAR ENDED JUNE 30, 1940

Line	Total Revenue	Operating Expense	Depreciation	Accident Reserve	Bond Interest	Non-Operating *Income* Expense	Total Net Deductions	Net Income	Bond Redemption	Surplus or *Deficit*
B	$582,193.20	$399,513.27	$43,913.79	$13,071.87	$6,681.98	*$2,055.09*	$461,125.82	$121,067.38	$13,187.51	$107,879.87
C	451,896.37	334,721.21	36,790.31	10,952.85	5,598.75	*1,722.25*	386,340.87	65,555.50	11,048.35	54,507.15
D	265,989.53	200,016.06	21,983.02	6,545.49	3,345.42	*1,029.48*	230,860.51	35,129.02	6,601.67	28,527.35
E	141,100.31	162,602.28	17,862.38	5,324.20	2,719.98	*852.32*	187,656.52	*46,556.21*	5,364.14	*51,920.35*
F	386,690.43	225,681.65	24,808.30	7,388.54	3,775.59	*1,168.56*	260,485.52	126,204.91	7,450.00	118,754.91
H	341,339.03	306,228.56	33,668.81	10,010.77	5,120.21	*1,550.42*	353,477.93	*12,138.90*	10,110.85	*22,249.75*
J	391,337.95	268,683.01	29,536.41	8,788.69	4,492.47	*1,374.15*	310,126.43	81,211.52	8,869.99	72,341.53
K	414,944.97	361,339.86	39,717.68	11,822.08	6,042.39	*1,854.39*	417,067.62	*2,122.65*	11,927.50	*14,050.15*
L	446,555.23	380,573.16	41,829.56	12,453.88	6,365.07	*1,960.33*	439,261.34	7,293.89	12,561.66	*5,267.77*
M	1,086.04	3,239.95	346.93	115.48	55.81	*48.76*	3,709.41	*2,623.37*	104.16	*2,727.53*
N	546,006.68	386,816.11	42,536.60	12,641.98	6,466.18	*1,954.20*	446,506.67	99,500.01	12,774.17	86,725.84
Total Cars	$3,969,139.74	$3,029,415.12	$332,993.79	$99,115.83	$50,663.85	*$15,569.95*	$3,496,618.64	$472,521.10	$100,000.00	$372,521.10
Bus No. 1 Park-Monterey	$68,984.67	$84,782.90	$16,383.95	$8,207.14	$5,937.81	....	$115,311.80	*$46,327.13*	....	*$46,327.13*
Bus No. 4 Embarcadero	42,425.08	34,685.00	....	3,255.60	....	....	37,940.60	4,484.48	....	4,484.48
Bus No. 5 Marina	9,910.61	15,126.84	2,920.59	1,463.81	1,058.23	....	20,569.47	*10,658.86*	....	*10,658.86*
Bus No. 6 Eureka-Diamond	50,256.91	46,682.90	8,934.02	4,532.32	3,233.82	....	63,383.06	*13,126.15*	....	*13,126.15*
Bus No. 7 Miraloma	5,038.32	16,329.04	3,074.92	1,587.80	1,111.04	....	22,102.80	*17,064.48*	....	*17,064.48*
Bus No. 8 Sunset-Parkside	7,577.38	18,356.16	3,515.25	1,779.09	1,272.52	....	24,923.02	*17,345.64*	....	*17,345.64*
Bus No. 9 Bayshore	10,625.86	18,015.66	3,356.43	1,756.99	1,211.10	....	24,340.18	*13,714.32*	....	*13,714.32*
Bus No. 10 Ocean View	14,616.17	24,328.27	4,514.15	2,377.51	1,628.81	....	32,848.74	*18,232.57*	....	*18,232.57*
Bus No. 11 Telegraph Hill	3,816.87	14,333.59	2,676.81	1,395.66	966.15	....	19,372.21	*15,555.34*	....	*15,555.34*
Total Buses	$213,251.87	$272,640.36	$45,376.12	$26,355.92	$16,419.48	....	$360,791.88	*$147,540.01*	....	*$147,540.01*
Total	$4,182,391.61	$3,302,055.48	$378,369.91	$125,471.75	$67,083.33	*$15,569.95*	$3,857,410.52	$324,981.09	$100,000.00	$224,981.09

Italic figures denote loss and deficiency.

SUMMARY OF INCOME AND OUTLAY DECEMBER 28, 1912, TO JUNE 30, 1940

INCOME

Passenger and Other Revenue	$79,539,001.87		
Subsidy from Harbor Commission	70,229.71		
Contributed	1,568,261.80		
Interest on Bonds and Daily Balances	670,408.10		
Miscellaneous Credits—Profit and Loss	318,489.95		
Cash Received from Sale of Original Bonds Issued	5,481,000.00		
Total Income and Credits		$87,647,391.43	

OUTLAY

Operating Expenses	$64,046,092.16		
Bond Interest Charges	4,294,850.90		
Injuries and Damages	1,984,204.01		
Miscellaneous Debits—Profit and Loss	148,438.66		
Total Expenses		$70,473,585.73	
Excess of Income over Expenses		17,173,805.70	
Bonds Redeemed		4,181,000.00	
Balance after Expenses and Bond Redemption		$12,992,805.70	
Expended for Construction Extensions, Betterments, Replacements and Renewals and Road and Equipment Retired		11,596,881.13	
Balance, Net Cash, Receivables, Stores, etc., on Hand. See Below:			$1,395,924.57

SOURCES OF FUNDS

From Bond Sales	$5,481,000.00
From Reconstruction & Replacement Fund	1,473,978.01
From Earnings & Contributions	4,866,649.10
	$11,821,627.11
Deduct Retirements	1,164,542.26
	$10,657,084.85
Add portion of Retirements Charged to Reserve	939,796.28
	$11,596,881.13

CASH

Cash, Revolving Fund, Net	$6,500.00		
*Cash, Operating Fund, Net	$82,848.18		
Cash, Accident Reserve Fund, Net	317.50		
†Cash, Reconstruction and Replacement Fund, Net	383,872.51		
Cash, Bond Redemption Fund, Net	....		
Cash, Bond Interest Fund, Net	....		
Total Net Cash		$1,273,538.19	

ACCOUNTS RECEIVABLE

Due from City and County of San Francisco	$57,686.11		
Due from Harbor Commission	....		
Miscellaneous Accounts Receivable	8,386.68		
Total Accounts Receivable		66,072.79	

STORES

At Car Barn	$90,686.96		
At Storage Yard	181,751.96		
Contributed Stores	336.69		
Total Stores		272,775.61	
TOTAL CASH, RECEIVABLES, STORES, ETC.		$1,612,386.59	

LIABILITIES

Accounts Payable, Contract Payments, Interfund, etc.	$209,906.72		
Accrued Interest Not Due	5,416.66		
Unadjusted Credits	1,138.64		
Total Liabilities		216,462.02	
NET FREE ASSETS			$1,395,924.57

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*Due to Reconstruction and Replacement Fund from Operating Fund for cash transferred for Purchase of Stores $137,898.24

*Due to Accident Reserve Fund from Operating Fund—net difference amount reserved and accident costs to date, and less cash in fund—$317.50 $59,913.03

†Due to Operating Fund from Reconstruction and Replacement Fund for labor and material on Reconstruction and Replacement Fund Replacement Jobs $2,133.81

EXHIBIT "D"

COMPARISON OF BUDGET WITH ACTUAL RECEIPTS AND EXPENDITURES FISCAL YEAR ENDED JUNE 30, 1940

	Budget Plus Supplemental Appropriations	Actual	Increase or *Decrease*
RECEIPTS			
Operating Revenue and Other Income	$4,270,019	$4,197,962	*$72,057*
EXPENDITURES			
Way and Structures	$202,985	$180,775	*$22,210*
Equipment	251,253	227,235	*24,018*
Power	564,500	550,534	*13,966*
Conducting Transportation	2,048,244	2,042,105	*6,139*
General and Miscellaneous*	288,190	287,326	*864*
Total Direct Operating	$3,355,172	$3,287,975	*$67,197*
Injuries and Damages	168,269	164,027	*4,242*
Employees' Compensation	24,000	15,711	*8,289*
Reconstruction and Replacement Fund	343,281	343,281	......
Total Operating Expenses and Reserves	$3,890,722	$3,810,994	*$79,728*
Additions and Betterments	305,000	90,971	*214,029*
Equipment	303,500	10,112	*293,388*
Bond Interest	67,500	67,500	......
Bond Redemption	100,000	100,000	......
Rapid Transit Investigation	11,700	......	*11,700*
Total Budgeted Expenditures and Accruals Fiscal Year 1939-1940	$4,678,422	$4,079,577	*$598,845*
Budgeted in Previous Fiscal Year:			
Rapid Transit Investigation	55,000	......	*55,000*
Improvements Geary Street	12,000	11,129	*871*
Total Expenditures and Accruals	$4,745,422	$4,090,706	*$654,716*
Less Forwarded to 1940-1941†	*551,783*	......	*551,783*
Total Expenditures and Accruals	$4,193,639	$4,090,706	*$102,933*
NET SAVINGS ON BUDGET ESTIMATE	*$76,380*	$107,256	$30,876

*Sick Leave Costs Included:		
Month of June, 1940		$4,169.19
12 Months to June 30, 1940		47,668.93
†Additions and Betterments	$204,798	
Equipment	291,985	
Rapid Transit Investigation	55,000	
	$551,783	

Italic figures denote loss and deficiency.

EXHIBIT "E"

INTRAFUND ACCOUNTS

JUNE, 1940

Due Reconstruction and Replacement Fund from Operating Fund for loan to purchase rails, etc.	$137,898.24
Due Operating Fund from Reconstruction and Replacement Fund for labor and material used on replacement jobs during Fiscal Year 1939-1940	2,133.81
Total per Balance Sheet	$140,032.05

EXHIBIT "F"

INTERFUND ACCOUNTS PAYABLE

JUNE 30, 1940

General City and County			
GENERAL FUND			
POWER BILLS			
Power Bills—April, May and June	$126,070.44		
PURCHASING DEPARTMENT			
Patterns for end castings—Switch Group	73.55		
DEPARTMENT OF PUBLIC WORKS			
Bureau of Engineering—Blueprinting, photostating, engineering, inspection—June 30, 1940	3,027.78		
Bureau of Building Repair—Services to June 30, 1940	37.25		
Total General Fund		$129,209.02	
EMPLOYEES' RETIREMENT SYSTEM			
Prior Service—June Actual	$2,748.69		
Hospital Services—January 1st to June 30th, actual	1.168.11		
Pension Matching—June actual	7,952.03		
Pension Matching—Contingent payrolls	185.45		
Compensation and Medical—June actual	961.72		
		13,016.00	
COUNTY ROADS FUND			
DEPARTMENT OF PUBLIC WORKS			
Bureau of Street Repair, Paving Maintenance and Replacement —January 1, 1940, to June 30, 1940—actual		3,956.78	
Total General City and County			$146,181.80
Public Service Enterprises			
PUBLIC UTILITIES COMMISSION			
ELECTRIC POWER BUREAU—Services—January 1, 1940, to June 30. 1940—actual	$3,926.23		
SAN FRANCISCO WATER DEPARTMENT—Services—Engineering—blueprinting—insurance—actual, June 30, 1940	1.487.43		
BUREAU OF ENGINEERING—Services—actual to June 30, 1940	12,944.68		
Total Public Service Enterprises			18.358.34
Total as per Balance Sheet			$164.540.14

SCHEDULE I

SCHEDULE OF ROAD AND EQUIPMENT AS OF JUNE 30, 1940

Acct. No.		Balance June 30, 1939	Additions Fiscal Year 1939-1940: Reconstruction and Replacement Fund	Additions Fiscal Year 1939-1940: Municipal Railway Fund	Additions Fiscal Year 1939-1940: Total	Retirements During Fiscal Year 1939-1940	Net Additions Fiscal Year 1939-1940	Balance June 30, 1940
	WAYS AND STRUCTURES							
502	Right of Way	$169,839.07	....	....	....	....	....	$169,839.07
503	Other Land Used in Electric Railway Operations	265,490.48	....	$42,787.24	$42,787.24	....	$42,787.24	308,277.72
504	Grading	520,765.22	$11,190.95	4,104.31	15,295.26	$11,882.00	3,413.26	524,178.48
505	Ballast	363,517.15	2,637.32	2,698.67	5,335.99	5,601.24	*265.25*	363,251.90
506	Ties	195,861.05	2,969.81	1,940.72	4,910.53	2,523.26	2,387.27	198,248.32
507	Rails, Rail Fastenings, and Joints	961,048.23	32,862.36	2,989.93	35,852.29	25,955.97	9,896.32	970,944.55
508	Special Work	367,328.17	5,784.49	173.85	5,958.34	6,644.53	*686.19*	366,641.98
510	Track and Roadway Labor	856,619.93	44,901.76	6,211.83	51,113.59	24,916.59	26,197.00	882,816.93
511	Paving	1,229,268.06	17,600.52	11,389.62	28,990.14	21,355.02	7,635.12	1,236,903.18
512	Roadway, Machinery and Tools	23,111.54	....	1,761.06	1,761.06	....	1,761.06	24,872.60
513	Tunnels and Subways	14,987.49	....	....	....	....	....	14,987.49
515	Bridges, Trestles and Culverts	4,689.04	....	....	....	....	....	4,689.04
516	Crossings, Fences and Signs	46,075.71	....	....	....	....	....	46,075.71
517	Signals and Interlocking Apparatus	20,160.19	....	....	....	....	....	20,160.19
518	Telephone and Telegraph Lines	179.07	....	....	....	....	....	179.07
519	Poles and Fixtures	276,335.17	....	1,781.77	1,781.77	56.27	1,725.50	278,060.67
520	Underground Conduits	157,032.80	....	....	....	....	....	157,032.80
521	Distribution System	821,306.75	7,469.97	2,383.87	9,853.84	7,422.33	2,431.51	823,738.26
523	Shops and Carhouses	977,319.82	....	10,170.47	10,170.47	....	10,170.47	987,490.29
524	Stations, Miscellaneous Buildings and Structures	40,398.28	....	7,840.08	7,840.08	1,133.23	6,706.85	47,105.13
	Total Ways and Structures	$7,311,333.22	$125,417.18	$96,233.42	$221,650.60	$107,490.44	$114,160.16	$7,425,493.38
	EQUIPMENT							
530-A	Passenger and Combination Cars, Electric	$1,698,442.64	$80,783.13	$167.61	$80,950.74	$4,224.53	$76,726.21	$1,775,168.85
530-B	Passenger and Combination Cars, Buses	317,904.42	....	....	....	....	....	317,904.42
532-A	Service Equipment, Electric	13,871.11	....	....	....	2,800.00	*2,800.00*	11,071.11
532-B	Service Equipment, Automotive	34,418.56	....	897.65	897.65	....	897.65	35,316.21
533	Electric Equipment of Cars	841,975.83	27,300.00	....	27,300.00	2,734.32	24,565.68	866,541.51
536	Shop Equipment	43,730.06	....	565.63	565.63	....	565.63	44,295.69
537	Furniture	35,750.26	....	4,681.54	4,681.54	1,178.67	3,502.87	39,253.13
	Total Equipment	$2,986,092.88	$108,083.13	$6,312.43	$114,395.56	$10,937.52	$103,458.04	$3,089,550.92
	Total Road and Equipment	$10,297,426.10	$233,500.31	$102,545.85	$336,046.16	$118,427.96	$217,618.20	$10,515,044.30

Italic figures denote loss and deficiency.

STATEMENT OF BUS LINE OPERATIONS

July 1, 1939, to June 30, 1940

	PASSENGER REVENUE				
	Route No. 1—Park-Monterey	$62,664.80			
	Route No. 4—Embarcadero	42,089.55			
	Route No. 5—Marina	9,429.50			
	Route No. 6—Eureka-Diamond	47,108.90			
	Route No. 7—Miraloma	4,359.50			
	Route No. 8—Sunset-Parkside	6,655.10			
	Route No. 9—Bayshore	9,635.60			
	Route No. 10—Ocean View	13,673.00			
	Route No. 11—Telegraph Hill	3,643.95			
	Over and Short Adjustment July 1, 1939 to June 30, 1940	54.70			
	Total Cash Passenger Revenue		$199,314.60		
	MISCELLANEOUS REVENUE				
	Advertising		1,263.97		
	REVENUE CREDITS				
	1,896 Special Tickets at 2½c	$47.40			
	8,433 Special Tickets at 5c	421.65			
	488,170 School Tickets at 2½c	12,204.25			
	Total Revenue Credits		12,673.30		
	Total Passenger, Misc. Revenue and Credits			$213,251.87	
	OPERATING EXPENSES				
	GROUP II—EQUIPMENT				
Acct. No.					
39A	Bus Engines, Labor and Material	$11,510.28			
39B	Painting Buses	618.59			
39C	Chassis, Labor and Material	4,331.91			
39D	Bus Tires, including Repairs	11,163.11			
39E	Bus Body Repairs	4,004.46			
39F	Repairs to Garage Equipment	118.84			
39G	Transmission, Labor and Material	495.66			
39H	Brake Work, Labor and Material	2,995.48			
	Total—Group II		$35,238.33		
	GROUP IV—CONDUCTING TRANSPORTATION				
69A	Station Expense	$205.00			
78A	Gasoline Buses	50,137.98			
78B	Oils and Lubricants, Buses	1,848.07			
78C	Conductors, Chauffeurs, Buses	111,757.05			
78D	Greasing, Servicing and Miscellaneous Expense	16,061.68			
78E	Cleaning and Washing Buses	5,444.83			
	Total—Group IV		185,454.61		
	GROUP VI—GENERAL AND MISCELLANEOUS				
88A	Pension Costs—Buses	$9,283.41			
88C	Sick Leave—Bus Employees	2,138.25			
88D	Sick Leave—Medical Fees	174.87			
*89A	Administration, Buses	26,400.00			
89B	Insurance (1,317,796 Miles at 2c)	26,355.92			
94	Stationery and Printing	1,080.00			
95	Store Expense, 10% of Material Cost	7,366.30			
98	Rent of Equipment — Service Truck — 2,190 Hours at 60c	1,314.00			
98A	Garage, Shop, Office and Equipment Rental	4,018.09			
98B	Rental of Buses	172.50			
	Total—Group VI		78,303.34		
	Total Operating Expenses			298,996.28	
	OPERATING LOSS				*$85,744.41*
	FIXED CHARGES				
	Accrued Depreciation, Buses	$44,647.74			
	Accrued Depreciation, Garage Equipment	387.86			
	Accrued Depreciation, Fare Boxes	340.52			
	Interest on Investment at 5%	16,419.48			
	Total Fixed Charges				61,795.60
	NET LOSS FISCAL YEAR				*$147,540.01*
	Average Net Loss Per Day (366 Days' Operation)				*$403.11*

*Allocation:

Superintendence—Plant and Equipment	$8,025.60
Superintendence—Operation of Buses	8,025.60
Superintendence—General	10,348.80
	$26,400.00

Italic figures denote loss and deficiency.

Acct. No.		Bus Mileage 1,317,798 Miles Itemized Cost Per Mile	Bus Hours 129,716 Hours Itemized Cost Per Hour
39A	Bus Engines, Labor and Material	.00873	.08873
39B	Painting Buses	.00047	.00477
39C	Chassis, Labor and Material, Buses	.00329	.03339
39D	Bus Tires, including Repairs	.00847	.08607
39E	Bus Body Repairs	.00304	.03087
39F	Repairs to Garage Equipment	.00009	.00092
39G	Transmission, Labor and Material, Buses	.00038	.00382
39H	Brake Work, Labor and Material, Buses	.00227	.02309
	Total—Group II Equipment	.02674	.27166
69A	Station Expense	.00016	.00158
78A	Gasoline, Buses	.03805	.38652
78B	Oils and Lubricants, Buses	.00140	.01425
78C	Conductors-Chauffeurs, Buses	.08480	.86155
78D	Greasing, Servicing and Miscellaneous Expense, Buses	.01219	.12382
78E	Cleaning and Washing Buses	.00413	.04198
	Total—Group IV Conducting Transportation	.14073	1.42970
88A	Pension Costs, Buses	.00704	.07157
88C	Sick Leave, Bus Employees	.00162	.01648
88D	Sick Leave, Medical Fees	.00013	.00135
89A	Administration, Buses	.02003	.20352
89B	Insurance, Buses	.02000	.20318
94	Stationery and Printing	.00082	.00833
95	Store Expense	.00560	.05679
98	Rent of Equipment	.00100	.01012
98A	Garage, Shop, Office and Equipment Rental	.00305	.03098
98B	Rental of Buses	.00013	.00133
	Total—Group VI General and Miscellaneous	.05942	.60365
	Total Operating Expense	.22689	2.30501
	Accrued Depreciation	.03443	.34981
	Interest on Investment	.01246	.12658
	Total Fixed Charges	.04689	.47639
	Total Expense	.27378	2.78140
	Advertising per Bus Mile	.00096	.00974
	Passenger Revenue per Bus Mile	.15125	1.53655
	Revenue Credits per Bus Mile	.00962	.09770
	Total Revenue	.16183	1.64399
	Net Loss	*.11195*	*1.13741*

PASSENGERS CARRIED

5c Fares	$3,983,423
5c Government Tickets	36
2½c School Tickets	488,170
Local Transfers	3,029,449
Free Passengers	5,068
Special Tickets, Free	1,360
Special Tickets, 2½c	1,896
Special Tickets, 5c	8,397
	$7,517,799

Note: Charges to Insurance Reserve July 1, 1939, to June 30, 1940:

Proportion Salary Expenses Claims Department	$3,635.48
Accident Claims Paid	5,208.74
Total	$8,844.22

Note: No subsidy receivable from the State Board of Harbor Commissioners for the fiscal year July 1, 1939, to June 30, 1940, as no loss is shown by operation of Embarcadero Bus Route for said fiscal year.

Italic figures denote loss and deficiency.

COMPARATIVE OPERATING RECEIPTS STATEMENT BETWEEN FISCAL YEARS

ENDED JUNE 30, 1940, AND JUNE 30, 1939

FISCAL YEAR ENDED JUNE 30, 1940				FISCAL YEAR ENDED JUNE 30, 1939				COMPARISON			
Line	Receipts	Car Hours	Receipts Per Car Hour	Line	Receipts	Car Hours	Receipts Per Car Hour	Line	Receipts	Car Hours	Receipts Per Car Hour
B	$547,846.20	121,334	$4.52	B	$561,738.85	121,913	$4.61	B	*$13,892.65*	*579*	*$0.09*
C	429,293.80	101,654	4.22	C	432,967.15	101,064	4.28	C	*3,673.35*	590	*.06*
D	257,980.10	60,741	4.25	D	265,593.30	62,040	4.28	D	*7,613.20*	*1,299*	*.03*
E	135,080.55	49,396	2.73	E	143,173.40	50,612	2.83	E	*8,092.85*	*1,216*	*.10*
F	361,867.70	68,540	5.28	F	362,510.75	68,762	5.27	F	*643.05*	*222*	.01
H	318,589.40	93,010	3.43	H	320,369.85	91,525	3.50	H	*1,780.45*	1,485	*.07*
J	372,398.05	81,600	4.56	J	379,358.30	80,802	4.69	J	*6,960.25*	798	*.13*
K	392,638.45	109,720	3.58	K	396,271.00	108,945	3.64	K	*3,632.55*	775	*.06*
L	422,931.65	115,570	3.66	L	414,727.00	115,294	3.60	L	8,204.65	276	.06
M	1,016.85	973	1.05	M	10,787.60	9,768	1.10	M	*9,770.75*	*8,795*	*.05*
N	513,839.05	117,466	4.37	N	514,424.60	112,274	4.58	N	*585.55*	5,192	*.21*
Total	$3,753,481.80	920,004	$4.08	Total	$3,801,921.80	922,999	$4.12	Total	*$48,440.00*	*2,995*	*$0.04*

	FISCAL YEAR ENDED JUNE 30, 1940	FISCAL YEAR ENDED JUNE 30, 1939	COMPARISON
Above Receipts Are For 5c Fares Only			
Total Receipts—Cars	$3,984,709.69	$4,000,375.66	*$15,665.97*
Total Receipts—Cars, per Car Hour	$4.33	$4.33	....
Bus Lines			
Bus Hours	129,716	80,127	49,589
Receipts—5c Fares	$199,259.90	$139,867.75	$59,392.15
Receipts—5c Fares, per Bus Hour	$1.54	$1.75	*$0.21*
Total Receipts—Buses	$213,251.87	$147,452.93	$65,798.94
Total Receipts—Buses, per Bus Hour	$1.64	$1.84	*$0.20*
Cars and Buses			
Car and Bus Hours	1,049,720	1,003,126	46,594
Receipts—5c Fares	$3,952,741.70	$3,941,789.55	$10,952.15
Receipts—5c Fares, per Car and Bus Hour	$3.77	$3.93	*$0.16*
Total Receipts—Cars and Buses	$4,197,961.56	$4,147,828.59	$50,132.97
Total Receipts—Cars and Buses, per Hour	$4.00	$4.13	*$0.13*

Italic figures denote loss and deficiency.

RECAPITULATION OF PASSENGER TRAFFIC

FISCAL YEAR JULY 1, 1939, TO JUNE 30, 1940

				Special Tickets		Non-Revenue Transfers								Special	
Line	5c Fares	Q.M.T.	School	2½c	5c	Div.	Fillmore	Hyde	Ellis	Ingl.	Total	Local Transfers	Free Passengers	Tickets Free	Total Passengers
B	10,695,090	906	1,037,682	5,037	22,685	3,984	153,042	.....	.....	.....	157,026	2,271,267	46,084	3,702	14,239,479
C	8,350,488	1,071	611,257	5,276	23,517	3,831	123,161	.....	.....	.....	126,992	1,584,562	32,998	3,753	10,739,914
D	5,004,789	726	149,281	2,745	12,226	.....	.....	30	.....	.....	30	829,205	11,531	1,953	6,012,486
E	2,702,365	56	110,902	1,434	6,371	.....	142,077	110,548	.....	.....	252,625	822,886	9,826	1,027	3,907,492
Ferries "F"	56,460	4	2,216	10	48	.....	.....	.....	.....	.....	.....	8,851	92	13	67,694
F	6,894,017	65	799,470	3,103	13,826	.....	.....	.....	38,837	.....	38,837	2,787,929	12,507	2,208	10,551,962
H	6,333,340	18	631,154	6,091	27,167	.....	.....	.....	.....	.....	.....	4,276,552	84,932	4,286	11,363,540
J	7,175,507	156	526,337	3,997	17,808	.....	.....	.....	.....	.....	.....	1,540,750	48,010	2,834	9,315,399
K	7,567,922	243	602,455	3,285	14,608	.....	.....	.....	.....	21,492	21,492	1,926,317	52,239	2,324	10,190,885
L	8,157,354	269	635,535	3,897	17,305	.....	.....	.....	.....	.....	.....	1,841,455	70,669	2,786	10,729,270
M	20,337	....	1,427	15	58	.....	.....	.....	.....	11	11	18,965	294	9	41,116
N	9,912,890	140	966,882	4,442	19,750	.....	.....	.....	.....	.....	.....	1,856,663	57,578	3,165	12,821,510
Misc.	2,211,288	634	213,171	944	4,215	.....	.....	.....	8,854	.....	8,854	1,359,263	4,915	669	3,803,953
Bus Route No. 1	1,253,930	7	231,908	506	2,249	.....	.....	.....	.....	.....	.....	1,196,542	1,507	361	2,687,010
Bus Route No. 4	841,956	25	1,236	540	2,381	.....	.....	.....	.....	.....	.....	.....	2,123	394	848,655
Bus Route No. 5	188,580	....	16,238	19	72	.....	.....	.....	.....	.....	.....	235,031	18	14	439,972
Bus Route No. 6	939,772	3	112,408	475	2,108	.....	.....	.....	.....	.....	.....	712,630	378	345	1,768,119
Bus Route No. 7	87,117	....	23,356	52	234	.....	.....	.....	.....	.....	.....	119,459	19	31	230,268
Bus Route No. 8	133,023	....	33,064	33	135	.....	.....	.....	.....	.....	.....	182,998	505	23	349,781
Bus Route No. 9	192,656	....	34,766	117	533	.....	.....	.....	.....	.....	.....	194,036	197	82	422,387
Bus Route No. 10	273,516	1	31,419	132	590	.....	.....	.....	.....	21	21	286,883	242	93	592,897
Bus Route No. 11	72,873	....	3,775	22	95	.....	.....	.....	.....	.....	.....	101,849	79	17	178,710
Total	79,065,270	4,324	6,775,939	42,172	187,981	7,815	418,280	110,578	47,691	21,524	605,888	24,154,093	436,743	30,089	111,302,499

COMPARISON OF CAR HOURS AND CAR MILES

FISCAL YEARS 1939-1940 AND 1938-1939

	Car Hours			Car Miles		
Line Cars	1939-1940	1938-1939	Increase or *Decrease*	1939-1940	1938-1939	Increase or *Decrease*
B	121,334	121,913	*579*	1,213,969	1,282,862	*68,893*
C	101,654	101,064	590	986,720	1,018,881	*32,161*
D	60,741	62,040	*1,299*	507,864	527,057	*19,193*
E	49,396	50,612	*1,216*	389,382	397,078	*7,696*
F	68,540	68,762	*222*	569,009	572,749	*3,740*
H	93,010	91,525	1,485	806,816	828,691	*21,875*
J	81,600	80,802	798	702,160	712,443	*10,283*
K	109,720	108,945	775	1,162,102	1,179,917	*17,815*
L	115,570	115,294	276	1,226,912	1,253,783	*26,871*
M	973	9,768	*8,795*	11,167	112,259	*101,092*
N	117,466	112,274	5,192	1,164,418	1,154,427	9,991
Total Cars	920,004	922,999	*2,995*	8,740,519	9,040,147	*299,628*
Bus No. 1	40,162	43,592	*3,430*	441,014	454,467	*13,453*
Bus No. 4	17,021	17,008	13	162,779	162,849	*70*
Bus No. 5	7,143	7,123	20	56,107	55,850	257
Bus No. 6	22,023	12,404	9,619	204,504	96,755	107,749
Bus No. 7	7,743	......	7,743	77,945	......	77,945
Bus No. 8	8,671	......	8,671	75,521	......	75,521
Bus No. 9	8,531	......	8,531	101,499	......	101,499
Bus No. 10	11,635	......	11,635	159,022	......	159,022
Bus No. 11	6,787	......	6,787	39,406	......	39,406
Total Buses	129,716	80,127	49,589	1,317,797	769,921	547,876
Total Cars & Buses	1,049,720	1,003,126	46,594	10,058,316	9,810,068	248,248

Italic figures denote loss and deficiency.

COMPARATIVE STATEMENT DATA FOR FISCAL YEARS ENDED JUNE 30, 1940, AND JUNE 30, 1939

	Fiscal Year Ended June 30, 1940				Fiscal Year Ended June 30, 1939			
	Total	Ratio to Passenger Revenue	Per Car Mile	Per Car Hour	Total	Ratio to Passenger Revenue	Per Car Mile	Per Car Hour
Passenger Revenue	4.135,903	100.000	.4112	3.9400	4,107,365	100.000	.4187	4.0946
Operating Expense	3,302,055	79.839	.3283	3.1457	3,215,883	78.296	.3278	3.2059
Interest on Funded Debt	67,083	1.622	.0067	.0639	72,083	1.755	.0073	.0719
Provision for Depreciation	378,370	9.148	.0376	.3604	343,281	8.358	.0350	.3422
Provision for Accidents	125,472	3.034	.0125	.1195	124,306	3.026	.0127	.1239
Net Income	324,981	7.858	.0323	.3096	392,275	9.551	.0400	.3911
Passenger Car and Bus Mileage	10,058,316	.....	.....	.....	9,810,068	.....	.....	.....
Passenger Car and Bus Hours	1,049,720	.....	.....	.....	1,003,126	.....	.....	.....
Platform Expense	1,685,018	40.741	.1675	1.6052	1,635,719	39.824	.1667	1.6306
Number of Electric Passenger Cars Owned	238	.....	.....	.....	234	.....	.....	.....
Number of Electric Work Cars Owned	2	.....	.....	.....	6	.....	.....	.....
Number of Motor Coaches Owned	31	.....	.....	.....	31	.....	.....	.....
Number of Auto Cars and Trucks Owned	18	.....	.....	.....	17	.....	.....	.....
Total Number of Electric Cars, Motor Coaches, Auto Cars and Trucks Owned	289	.....	.....	.....	288	.....	.....	.....
Revenue Passengers Carried	86,075,686	.....	8.5577	81.9987	84,962,183	.....	8.6607	84.6974
Free Transfer Passengers Carried	24,759,981	.....	2.4616	23.5872	22,285,626	.....	2.2717	22.2162
Free Passengers (Employees, Police, etc.)	466,832	.....	.0464	.4447	492,040	.....	.0502	.4905
Total Passengers Carried	111,302,499	.....	11.0657	106.0306	107,739,849	.....	10.9826	107.4041

Note: Above Includes Bus Operation.

COST STATEMENT—ITEMIZED ACCOUNTS

Fiscal Year July 1, 1939, to June 30, 1940

STREET CAR OPERATION ONLY

Acct. No.	Name	Amount	Per Car Mile	Per Car Hour
	I. WAY AND STRUCTURES			
1	Superintendence of Way and Structures	$17,524.81	.00201	.01905
2	Ballast	387.20	.00005	.00042
3	Ties	380.15	.00004	.00041
4	Rails	2,778.30	.00032	.00302
5	Rail Fastenings and Joints	5,272.71	.00060	.00573
6	Special Work	905.28	.00010	.00098
8	Roadway and Track Labor	75,990.18	.00869	.08260
9	Miscellaneous Road and Track Expense	3,176.92	.00036	.00345
10	Paving	14,917.66	.00171	.01622
11	Cleaning and Sanding Tracks	26,433.93	.00303	.02873
13	Tunnels	764.38	.00009	.00083
15	Bridges, Trestles and Culverts	113.20	.00001	.00012
16	Crossings, Fences, Guards and Signs	810.54	.00009	.00088
17	Signals and Interlocking System	706.17	.00008	.00077
18	Telephone and Telegraph System	9.62	.00000	.00001
20	Poles and Fixtures	4,488.53	.00051	.00488
22	Distribution System	22,703.12	.00260	.02468
23	Miscellaneous Electric Line Expense	328.88	.00004	.00036
24	Buildings and Structures	2,683.71	.00031	.00292
28	Transportation for Investment: Credit	*1,217.25*	*.00014*	*.00132*
	Total Way and Structures	$179,158.04	.02050	.19474
	II. EQUIPMENT			
29	Superintendence of Equipment	$2,618.28	.00030	.00284
30	Passenger and Combination Cars	145,928.21	.01670	.15862
32	Service Equipment	45.80	.00001	.00005
33	Electric Equipment of Cars	36,999.54	.00423	.04022
36	Shop Equipment, Machinery and Tools	723.26	.00008	.00079
37	Shop Expenses	3,977.51	.00045	.00432
38	Vehicles and Horses	1,662.34	.00019	.00181
39	Other Misc. Equipment Expenses	28.95	.00000	.00003
	Total Equipment	$191,983.89	.02196	.20868

Italic figures denote loss and deficiency.

Acct. No.	Name	Amount	Per Car Mile	Per Car Hour
	III. POWER			
45	Superintendence of Power	$415.77	.00005	.00045
47	Power Plant Equipment	7.93	.00000	.00001
59	Power Purchased—Propulsion	545,237.26	.06238	.59264
59A	Power Purchased for Lighting Car Barns	3,421.04	.00039	.00372
59B	Power Purchased for Lighting Tunnels	1,451.44	.00016	.00158
	Total Power	$550,533.44	.06298	.59840
	IV. CONDUCTING TRANSPORTATION			
63	Superintendence of Transportation	$101,168.59	.01157	.10996
64	Conductors and Motormen	1,573,261.45	.18000	1.71006
66	Miscellaneous Car Service Employees	6,381.41	.00073	.00694
67	Miscellaneous Car Service Expense	10,575.71	.00121	.01150
68	Station Employees	11,656.99	.00133	.01267
69	Station Expense	1,141.02	.00013	.00124
70	Car House Employees	133,960.85	.01532	.14561
71	Car House Expense	3,768.63	.00043	.00410
72	Oper. of Signal and Interlocking Appar.	9,240.73	.00106	.01004
73	Operation of Tel. and Tel. System	4,870.14	.00057	.00529
78	Miscellaneous Transportation Expense	624.74	.00007	.00068
	Total Conducting Transportation	$1,856,650.26	.21242	2.01809
	VI. GENERAL AND MISCELLANEOUS			
83	Salaries and Expense—General Officers	$12,179.92	.00139	.01323
84	Salaries and Expense—Gen. Off. Clerks	27,392.69	.00313	.02978
85	General Office Supplies and Expense	2,519.65	.00029	.00274
86	Law Expenses	68.75	.00001	.00007
88	Pensions and Gratuities	167,776.72	.01920	.18237
89	Miscellaneous General Expense	6,300.55	.00072	.00685
92	Injuries and Damages—Employees	15,710.64	.00180	.01708
93	Insurance	805.89	.00009	.00088
94	Stationery and Printing	15,182.35	.00174	.01650
95	Store Expense	5,002.83	.00057	.00544
96	Garage and Stable Expenses	2,852.21	.00033	.00310
97	Rent of Tracks and Terminals	5,800.55	.00066	.00630
	Credit Charges to Bus Line Operation	*10,503.26*	*.00120*	*.01142*
	Total General and Miscellaneous	$251,089.49	.02873	.27292

Italic figures denote loss and deficiency.

Acct. No.	Name		Amount	Per Car Mile	Per Car Hour
	RECAPITULATION				
I.	Way and Structures		$179,158.04	.02050	.19474
II.	Equipment		191,983.89	.02196	.20868
III.	Power		550,533.44	.06298	.59840
IV.	Conducting Transportation		1,856,650.26	.21242	2.01809
VI.	General and Miscellaneous		251,089.49	.02873	.27292
	Total Recapitulation		$3,029,415.12	.34659	3.29283
	Depreciation Reserve	$378,369.91			
	Less Applicable to Buses	45,376.12	332,993.79	.03810	.36195
	*Accident Reserve	$125,471.75			
	Less Applicable to Buses	26,355.92	99,115.83	.01134	.10773
	Bond Interest	$67,083.33			
	Less Applicable to Buses	16,419.48	50,663.85	.00580	.05507
	Grand Total		$3,512,188.59	.40183	3.81758

*Actual Payments and Accident Costs	$164,026.76
Less Applicable to Buses	8,844.22
	$155,182.54

Car Mileage	8,740,518
Car Hours	920,004

Note: Bus Line Operation Not Included.

COST STATEMENT—ITEMIZED ACCOUNTS

Fiscal Year July 1, 1939, to June 30, 1940

BUS OPERATIONS ONLY

Acct. No.	Name	Amount	Per Bus Mile	Per Bus Hour
	II. EQUIPMENT			
39A	Bus Engines, Labor and Material	$11,510.28	.00873	.08873
39B	Painting Buses	618.59	.00047	.00477
39C	Chassis, Labor and Material, Buses	4,331.91	.00329	.03340
39D	Bus Tires, including Repairs	11,163.11	.00847	.08606
39E	Bus Body Repairs	4,004.46	.00304	.03087
39F	Repairs to Garage Equipment	118.84	.00009	.00092
39G	Transmission, Labor & Material, Buses	495.66	.00038	.00382
39H	Brake Work, Labor & Material, Buses	2,995.48	.00227	.02309
	Total Equipment	$35,238.33	.02674	.27166
	IV. CONDUCTING TRANSPORTATION			
69A	Station Expenses, Buses	$205.00	.00015	.00158
78A	Gasoline, Buses	50,137.98	.03805	.38652
78B	Oils, Lubricants, Buses	1,848.07	.00140	.01425
78C	Conductors, Chauffeurs, Buses	111,757.05	.08481	.86155
78D	Greasing and Servicing, Buses	16,061.68	.01219	.12382
78E	Cleaning and Washing, Buses	5,444.83	.00413	.04198
	Total Conducting Transportation	$185,454.61	.14073	1.42970

VI. GENERAL AND MISCELLANEOUS

Acct. No.	Name	Amount	Per Bus Mile	Per Bus Hour
88A	Pension Costs, Buses	$9,283.41	.00705	.07157
88C	Sick Leave, Bus Employees	2,138.25	.00162	.01648
88D	Sick Leave, Medical Expenses	174.87	.00013	.00135
*89A	Administration, Buses	26,400.00	.02003	.20352
94	Stationery and Printing	1,080.00	.00082	.00832
95	Store Expenses	7,366.30	.00559	.05679
98	Rent of Equipment	1,314.00	.00100	.01013
98A	Garage, Shop, Office and Equip. Rental	4,018.09	.00305	.03098
98B	Rental of Buses	172.50	.00013	.00133
	Total General and Miscellaneous	$51,947.42	.03942	.40047

*Allocation:

Superintendence—Plant & Equipment	$8,025.60
Superintendence—Operation of Buses	8,025.60
Administration—General	10,348.80
	$26,400.00

RECAPITULATION

		Amount	Per Bus Mile	Per Bus Hour
II.	Equipment	$35,238.33	.02674	.27166
IV.	Conducting Transportation	185,454.61	.14073	1.42970
VI.	General and Miscellaneous	51,947.42	.03942	.40047
	Total Recapitulation	$272,640.36	.20689	2.10183
	Depreciation Reserve	$45,376.12	.03443	.34981
	†Injuries and Damages (Reserve)	26,355.92	.02000	.20318
	Total Reserves	$71,732.04	.05443	.55299
	Interest on Investment	$16,419.48	.01246	.12658
	Total Bus Costs	$360,791.88	.27378	2.78140
	†Actual Payments and Accident Costs	$8,844.22		
	Bus Mileage	1,317,798		
	Bus Hours	129,716		

ANNUAL REPORT OF BUREAU OF CLAIMS

Fiscal Year Ended June 30, 1940

1.	Total passengers carried during year		111,302,499
2.	Car miles operated:		
	Cars	8,740,518	
	Buses	1,317,798	10,058,316
3.	Number of passengers to mile		11.07
4.	Number of accident reports filed		4,801
5.	Number of accidents fatal		7
6.	Number of fatal accidents to passengers		0
7.	Number of accidents—personal injuries—passengers		1,635
8.	Number of claims presented		1,217
9.	Number of claims adjusted		721
10.	Number of suits instituted		116
11.	Number of suits pending		121
12.	Number of passengers carried per accident report		23,183
13.	Number of passengers carried per personal injury report		68,075
14.	Number of passengers carried per fatal accident to passengers		(No fatal accidents to passengers)

CLASSIFICATION

1.	Car collisions	48	.0100
2.	Auto and wagon collisions	2,030	.4228
3.	Boarding moving car	469	.0977
4.	Leaving moving car	203	.0423
5.	Miscellaneous	2,051	.4272
		4,801	1.0000

1.	Percentage of accidents to passengers carried	.00004
2.	Total revenue	$4,182,391.61
3.	Total amount paid for accident claims, office and miscellaneous expense	$164,026.76
4.	Ratio to operating revenue	.0392

RECAPITULATION

Amounts Paid

1.	Personal injuries	$109,233.44
2.	Property damage	6,148.93
*3.	Salaries and wages	29,023.51
4.	Miscellaneous and hospital	19,620.88
	Total	$164,026.76

Note:

1. Item No. 4 of the above "Number of accident reports filed" also includes any and all reports of accidents happening near the cars and buses in which this railway was not involved.

*2. Salaries and wages account includes expense of city attorney's office which amounts to $11,286.00.

COMPARATIVE STATEMENT OF COMPLAINTS AND COMMENDATIONS

Fiscal Years Ended June 30, 1940, and June 30, 1939

	GEARY STREET DIVISION		17TH STREET DIVISION	
	Fiscal Year Ended June, 1940	Fiscal Year Ended June, 1939	Fiscal Year Ended June, 1940	Fiscal Year Ended June, 1939
Discourtesy	83	81	65	69
Improper handling of transfers	21	33	13	20
Not allowing passengers sufficient time to board or alight from cars	41	63	31	64
Failure to stop for intending passengers	62	38	33	33
Carrying passengers beyond destination	29	20	20	27
Careless operation of car	36	59	27	38
Miscellaneous	73	77	50	61
Total No. of complaints received	345	371	239	312
Commendations received	42	27	33	29

COMPARATIVE STATEMENT OF BAD ORDER CARS TURNED IN

Fiscal Year Ended June 30, 1940

	Geary Street Car Barn	17th Street Car Barn	Total	System Average
Number of cars	468	540	1,008	
Mileage	3,666,944	5,073,574	8,740,518	
Mileage per turn-in	7,835	9,396		8,671
Accidents not included in above	206	162	368	

Fiscal Year Ended June 30, 1939

	Geary Street Car Barn	17th Street Car Barn	Total	System Average
Number of cars	345	423	768	
Mileage	3,765,083	5,275,064	9,040,147	
Mileage per turn-in	10,913	12,475		11,771
Accidents not included in above	212	237	449	
Decreased mileage per turn-in Fiscal Year Ended June 30, 1940, under Fiscal Year Ended June 30, 1939				3,100

BUS ROUTES IN OPERATION—JUNE 30, 1940

	Miles		Miles
ROUTE No. 1—PARK:			
From California Street and Tenth Avenue to Monterey Boulevard and Edna Street via California Street, Eleventh Avenue, Clement Street, Tenth Avenue, Golden Gate Park, Ninth Avenue, Judah Street, Seventh Avenue, Laguna Honda Boulevard, Portola Drive, Miraloma Drive, Yerba Buena Avenue, Plymouth Avenue, Monterey Boulevard, Ridgewood Avenue, Hearst Avenue and Edna Street, returning via Monterey Boulevard, Plymouth Avenue, Yerba Buena Avenue, Miraloma Drive, Portola Drive, Laguna Honda Boulevard, Seventh Avenue, Judah Street, Ninth Avenue, Golden Gate Park and Tenth Avenue. Connects with lines B, C, K, L, N and Bus Route No. 7. Mileage one way....	5.15	Round Trip	10.30
ROUTE No. 4—EMBARCADERO:			
From Aquatic Park to Hyde and Jefferson Streets to Southern Pacific Depot at Third and Townsend Streets via Jefferson Street, The Embarcadero, Berry Street and Third Street, returning via Townsend Street, Second Street, Berry Street, The Embarcadero and Jefferson Street. Mileage one way..	3.40	Round Trip	6.80
ROUTE No. 5—MARINA:			
From Scott and Chestnut Streets, bus makes continuous trip via Chestnut Street, Broderick Street, Marina Boulevard and Scott Street to Chestnut Street. Connects with line F. Mileage one way....	.56	Round Trip	1.12
ROUTE No. 6—EUREKA-DIAMOND:			
From Market and Castro Streets to Twenty-third and South Van Ness Avenue via Castro Street, Nineteenth Street, Eureka Street, Twenty-third Street and Diamond Street to Duncan Street, making a "U" turn, thence via Diamond Street, Twenty-fifth Street, Church Street, Twenty-fourth Street and South Van Ness Avenue, returning via Twenty-third Street, Chattanooga Street, Twenty-fourth Street, Church Street, Twenty-fifth Street, Diamond Street, Twenty-third Street, Eureka Street, Nineteenth Street, Collingwood Street and Market Street to Castro Street. Connects with lines J, K and L. Mileage one way......................	2.75	Round Trip	5.50

	Miles		Miles
ROUTE No. 7—MIRALOMA: From Forest Hill Station to Rio Court and Teresita Boulevard, via Laguna Honda Boulevard, Portola Drive, Evelyn Way, Teresita Boulevard, El Serano Court and Rio Court; returning via Teresita Boulevard, Fowler Avenue, Portola Drive, Laguna Honda Boulevard to Forest Hill Station. Connects with lines K, L and Bus Route No. 1. Mileage one way. .	1.35	Round Trip	2.70
ROUTE No. 8—SEVENTEENTH AVENUE: From Seventeenth Avenue and Judah Street to Fifteenth Avenue and Taraval Street, via Judah Street, Eighteenth Avenue, Kirkham Street, Seventeenth Avenue, Ortega Street, Sixteenth Avenue, Rivera Street, and Fifteenth Avenue, returning via Taraval Street, Sixteenth Avenue, Ortega Street, Seventeenth Avenue to Judah Street. Connects with lines L and N. Mileage one way.	1.525	Round Trip	3.05
ROUTE No. 9—BAYSHORE BOULEVARD: From Potrero Avenue and Army Street to San Bruno Avenue and Ware Street via Bayshore Boulevard and Ware Street, returning via San Bruno Avenue, Olmstead Street, Girard Street, Woolsey Street, Somerset Street, Silver Avenue and Bayshore Boulevard to Army Street. Connects with line H. Mileage one way.	2.275	Round Trip	4.55
ROUTE No. 10—OCEAN VIEW: From St. Francis Circle at West Portal Avenue and Junipero Serra Boulevard to Sickles Avenue and Huron Street via Junipero Serra Boulevard, Worcester Street, Randolph Street, Orizaba Avenue, Broad Street, Plymouth Avenue, Sickles Avenue, Mission Street and Huron Street, returning via Sickles Avenue, Plymouth Avenue, Broad Street, Orizaba Avenue, Randolph Street, Worcester Street and Junipero Serra Boulevard to St. Francis Circle. Connects with line K. Mileage one way.	2.85	Round Trip	5.70
ROUTE No. 11—TELEGRAPH HILL: From Columbus Avenue and Union Street to the summit of Telegraph Hill (Coit Tower) via Union Street, Stockton Street, Lombard Street and Telegraph Hill Boulevard, returning over the reverse of this route. Connects with lines E and F. Mileage one way.	.75	Round Trip	1.50
Total Bus Mileage One Way.	20.61	Round Trip	41.22

MILEAGE—SINGLE TRACK—JUNE 30, 1940

Operated Track:		
Track Wholly Owned and Operated (exclusive of Bridge Loop)	69.80	
Track Wholly Owned and Operated Bridge Loop	.26	70.06
Track Jointly Owned and Jointly Operated	1.33	
Track Not Owned but Jointly Operated	2.97	
Track Wholly Owned and Jointly Operated (Bridge Loop)	.21	4.51
Total Operated Track		74.57
Track Owned by Municipal Railway, Operated Exclusively by Market Street Railway (Bridge Loop)		.46
Non-Operated Track, Sidings, Turnouts, etc.:		
Line "M"—Plymouth Avenue to Sloat Boulevard	4.72	
Taraval Street between Forty-sixth and Forty-eighth Avenues	.25	
Masonic Avenue Spur	.02	
Polk and Geary Streets Spur	.05	
Columbus Avenue, between Washington and Jackson Streets	.08	
Geary Street Carhouse, Sidings and Turnouts	2.18	
Seventeenth Street Carhouse, Sidings and Turnouts	1.65	
Total		8.95
Total Single Track Mileage, June 30, 1940		83.98

MILES, ROUTES AND ROUTE MILEAGE—JUNE 30, 1940

Line "B"	14.12	Ocean to Ferries via Geary Street.
Line "C"	11.82	Thirty-third Avenue and California Street to Ferries via California and Geary Streets.
Line "D"	8.48	Presidio to Ferries via Van Ness Avenue and Geary Street.
Line "E"	7.54	Presidio to Ferries via Union Street and Columbus Avenue.
Line "F"	6.16	Scott and Chestnut Streets to Market, Fourth and Ellis Streets via Chestnut and Stockton Streets.
Line "H"	9.32	Army Street and Potrero Avenue to Fort Mason Transport Docks via Potrero and Van Ness Avenues.
Line "J"	9.12	Thirtieth and Church Streets to Ferries via Church and Market Streets.
Line "K"	15.34	Grafton and Brighton Avenues to Ferries via Ocean Avenue, Twin Peaks Tunnel and Market Street.
Line "L"	16.32	Beach to Ferries via Taraval Street, Twin Peaks Tunnel and Market Street.
Line "N"	14.56	Ocean Beach to Ferries via Judah Street, Sunset Tunnel and Market Street.
	112.78	Total Route Mileage (Ferry).
	.47	Municipal Railway Operated Mileage (Bridge Loop).
	113.25	Total Route Mileage.
	74.57	Total Track Mileage Operated.
	38.68	Duplicate Routes.

Note: Lines B, C, D, J, K, L and N mentioned above, when operating to the Bay Bridge terminal operate thirty-three hundredths of a mile less than the route mileage shown.

CHRONOLOGY

December 2, 1902. Election. Proposition authorizing $700,000.00 bonds defeated.

October 8, 1903. Election. Proposition authorizing $710,000.00 bonds defeated.

November 6, 1903. Franchise of Geary Street, Park and Ocean Railroad Company expired.

June, 1906. Budget appropriation $325,000.00 for Geary Street Railroad. Used for reconstruction and rehabilitation of streets and buildings destroyed in disaster of April 18-22, 1906.

June, 1907. Budget appropriation $720,000.00 for Geary Street Railroad. Subsequently declared invalid by court.

June 24, 1909. Election. Proposition authorizing $1,950,000.00 bonds defeated, lacking 203 votes.

December 30, 1909. Election. Proposition authorizing $2,020,000.00 bonds carried by 20,000 majority.

April 16, 1910. Superior Court declares bond issue valid in every respect. Decision affirmed by Supreme Court in July, 1910.

July 18, 1910. First lot of bonds, $121,000.00 sold.

Summer, 1911. Construction of Geary Street Railroad commenced.

May 5, 1912. The Geary Street, Park & Ocean Railroad (cable system) ceased operations.

December 28, 1912. The Municipal Railway (overhead trolley system) commenced operation on Geary Street from Kearny Street to Thirty-third Avenue and Park, with ten (10) cars, under direction of Thomas A. Cashin, Superintendent, Mayor James Rolph, Jr., acting as motorman on first car.

April 22, 1913. Referendum election. Agreement with Sutter Street Railroad Company respecting use of tracks on lower Market Street ratified.

June 25, 1913. Municipal Railway in full operation from Ferries to Beach and Park. Forty-three cars owned.

August 26, 1913. Election. Proposition authorizing $3,500,000.00 bonds for extensions of Municipal Railway carried by 37,670 majority.

December 11, 1913. Presidio & Ferries R. R. Company (Union Street Division) taken over by Municipal Railway.

May 16, 1914. Masonic Avenue branch completed.

August 15, 1914. Van Ness Avenue line from Market Street in operation to Exposition grounds.

September 7, 1914. Potrero Avenue line in operation, Eleventh and Market Streets to Twenty-fifth Street and Potrero Avenue.

December 29, 1914. Stockton Street, Columbus Avenue and North Point line in operation through tunnel.

December 29, 1914. Fort Mason Loop commenced operation.

February 10, 1915. Columbus Avenue line in operation from Ferries to Exposition grounds.

February 19, 1915. California Street line in operation to Thirteenth Avenue.

March 28, 1915. California Street line in operation to Thirty-third Avenue.

April 25, 1915. Beach loop, Geary Street line, commenced operation.

January 24, 1916. Stockton Street branch ("E") in operation from Presidio to Market, Fourth and Ellis Streets.

April 29, 1916. Church Street line (Sect. "C"), Sixteenth to Eighteenth and Twenty-second to Thirtieth Streets, ready for operation.

June 1, 1916. Columbus Avenue ("J" line), Ferries to Exposition grounds discontinued.

June 12, 1916. Church Street line (Sect. "A"), Van Ness Avenue and Market Street to Sixteenth and Church Streets, started by day labor. Held up by United Railroads injunction.

June 28, 1916. Church Street line (Sect. "B"), Eighteenth to Twenty-second Streets, ready for operation.

December 21, 1916. Potrero Avenue line ("H") extended from Twenty-fifth Street to Army Street. Twenty-two hundredths mile added. Placed in operation January 19, 1917.

August 11, 1917. Church Street line ("J"), Van Ness Avenue and Market Street to Church and Thirtieth Streets, commenced operation.

February 3, 1918. Twin Peaks tunnel line ("K") to Van Ness Avenue and Bush Street commenced operation. (Length of tunnel 11,920 feet.)

May 4, 1918. Greenwich Street extension (Van Ness Avenue line), Scott to Baker Street, commenced operation.

June 1, 1918. Market Street lines ("J" and "K"), Van Ness Avenue to Geary Street, commenced operation, establishing through service, Ferries to Sloat Boulevard.

October 30, 1918. Third loop opened at Ferry terminus.

February 21, 1919. Market Street line ("K") commenced operation over United Railroads' tracks on Ocean Avenue to Miramar Avenue.

April 12, 1919. Taraval Street line ("L") commenced operation from West Portal of Twin Peaks tunnel to Thirty-third Avenue, operating co-jointly with the United Railroads on Taraval Street between Twentieth Avenue and Thirty-third Avenue.

May 18, 1919. Market Street line ("K") commenced operation over extension along Ocean and Brighton Avenues to Grafton Avenue.

July 22, 1919. Changed and shortened route of Van Ness Avenue line ("D") and Union Street line ("E") by track connection on Union Street between Franklin Street and Van Ness Avenue.

August 7, 1919. One elevator placed in operation at Forest Hill station of Twin Peaks tunnel.

December 8, 1919. Presidio loop, Van Ness Avenue and Union Street lines, commenced operation.

January 14, 1923. Taravel Street line ("L") commenced operation over extension on Taraval Street, between Thirty-third Avenue and Ocean Beach.

October 15, 1923. Taraval Street line ("L") operated as a through line from Beach to Ferries via Twin Peaks tunnel and Market Street.

October 6, 1925. Line "M" commenced operation between Plymouth Avenue and Broad Street to St. Francis Circle.

February 1, 1928. Second elevator (the largest on the Pacific Coast) installed at Forest Hill station of Twin Peaks tunnel.

October 21, 1928. Line "N" commenced operation between Forty-eighth Avenue and Judah Street and the Ferries.

January 8, 1932. Jurisdiction over the San Francisco Municipal Railway was transferred from the Board of Public Works to the San Francisco Public Utilities Commission under provisions of the new charter.

June 1, 1932. Line "O" commenced operation between Van Ness Avenue and Market Street and the Presidio (a rearrangement of lines "D," "E," and "H").

July 15, 1932. Line "O" abandoned and lines "D," "E," and "H" placed on their original routing.

December 5, 1932. Line "A" discontinued.

December 5, 1932. Bus Route No. 1 extended to Tenth Avenue and Lake Street.

January 3, 1933. Bus Route No. 2 discontinued.

January 30, 1933. Bus Route No. 1 North Terminal changed to Tenth Avenue and California Street.

December 5, 1933. Bus Route No. 1 South Terminal changed to Edna Street and Monterey Boulevard.

July 28, 1935. Bus Route No. 6 commenced operation. Eureka Valley Station to Diamond and Clipper Streets.

September 15, 1937. Line "L" extension to Fleishhacker Pool commenced operation.

January 1, 1938. Bus Route No. 5 Marina Route routed over Broderick Street instead of Divisadero Street.

May 8, 1938. Bus Route No. 6 South Terminal changed to Diamond and Duncan Street.

January 15, 1939. Bay Bridge trains started operation to Bridge Terminal. Alternate Municipal Railway cars operated over Bay Bridge loop.

June 25, 1939. Bus Route No. 6 rerouted over Castro, Nineteenth, Eureka, Twenty-third, Diamond, Clipper, Church, Twenty-fifth, Collingwood, and Market Streets.

July 9, 1939. Bus Route No. 8 commenced operation from Judah Street and Seventeenth Avenue to Taraval Street and Fifteenth Avenue.

July 23, 1939. Bus Route No. 7 commenced operation from Forest Hill Station to Rio Court.

July 30, 1939. Bus Route No. 11 commenced operation from Union and Powell Streets to Coit Tower, Telegraph Hill.

August 6, 1939. Bus Route No. 9 commenced operation from Potrero Avenue and Army Street to Bacon and Somerset Streets.

August 6, 1939. Bus Route No. 10 commenced operation from Balboa Terraces to San Jose Avenue and Plymouth Avenue.

August 6, 1939. Car line "M" discontinued and replaced by Bus Route No. 10.

August 24, 1939. Bus Route No. 10 Northern Terminal extended from Balboa Terraces to St. Francis Circle.

October 14, 1939. Bus Route No. 6 Southern Terminal extended to South Van Ness Avenue and Twenty-third Street.

October 15, 1939. Bus Route No. 10 Southern Terminal extended to Sickles Avenue and Mission Street.

October 30, 1939. Bus Route No. 9 Southern Terminal extended to San Bruno Avenue and Ware Street.

December 27, 1939. Five new modern stream lined passenger cars were placed in service.

June 30, 1940. Total single track mileage, 83.98 (see mileage statement).

June 30, 1940. Total one-way bus mileage, 20.61 (see mileage statement).

Compiled Under Direction
of the
PUBLIC UTILITIES COMMISSION
by
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Director
BUREAU OF PUBLIC RELATIONS

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